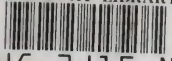


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Maine Medical Association meets at Portland, June, 1917

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THE JOURNAL

OF



THE

Maine Medical Association.

The Official Organ of the State and County Medical Societies.

VOL. VII, No. 1

AUGUST, 1916.

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TABLE OF CONTENTS

Original Articles—

The President's Address.....	1
Necrology... ..	31
Notices	33
Bulletin No. 8.....	34

Editorial Comment—

Third New England Tuberculosis Conference	35
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A Clearing House for Medical Papers in Maine.....	35
The National Board of Medical Ex- aminers of the United States.....	36

Miscellaneous—

Abstracts from Current Literature..	39
County News and Notes.....	40

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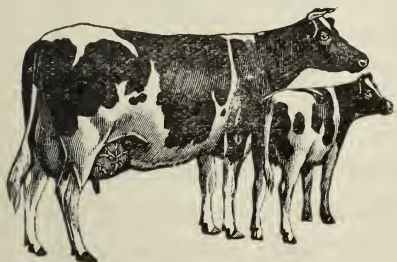
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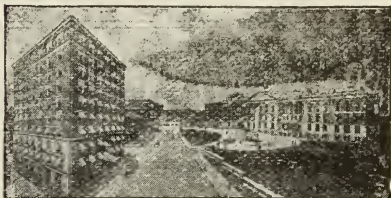
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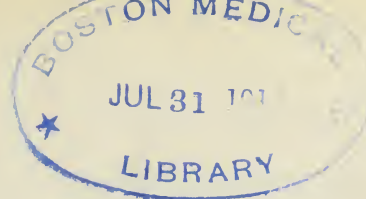
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VOL. VII.

AUGUST, 1916.

No. 1

* THE PRESIDENT'S ADDRESS.

By ERASTUS EUGENE HOLT, A.M., M.D., LL. D., F.A.C.S.

PORTLAND, MAINE.

*Mr. Chairman, Members of the Maine Medical Association, Invited
Guests, Ladies and Gentlemen:—*

We have all greeted each other and are glad to be here together at this annual gathering. We trust that the literary part of the program impresses you favorably, that you will find it helpful to you in your daily work and that the social functions will be enjoyable while you are here and enable you to go back to your several homes rested, refreshed and benefited both physically and mentally with a pleasing recollection of the sixty-fourth annual meeting of the Maine Medical Association.

One year ago I was elected president of this Association. At that time I thanked those who took part in that event and assured them that it would be my endeavor to discharge the duties of the office to the best of my ability.

Our meeting at Poland Spring last year, brought about by Dr. Hill of Waterville, was a great success in every respect. It could not be otherwise, for we were guests of the Ricker Brothers with everything at our disposal as free as the air we breathed. With a cordial invitation from such a famous host it is no wonder that members took their wives, their daughters, their sisters, their cousins, or their aunts to Poland Spring and made this meeting by far the largest in the history of this Association. The medical profession of Maine are

* Delivered at the sixty-fourth annual meeting of the Maine Medical Association held at City Hall, Portland, Maine, June 7-8, 1916.

under great obligation to the Ricker Brothers for the magnificent entertainment given them last year. The members of this Association learn with great pleasure that the committee having the matter in charge will, in the near future, present to the Ricker Brothers, with appropriate ceremonies, a memorial in commemoration of this ever-to-be remembered meeting at Poland Spring. The people of this state and nation are also under great obligation to them for having discovered the health giving properties of this spring of water and made it so available that it can now be found on sale on every traveled route of the world.

If we go back in memory we are again reminded of another instance of the generosity of the Ricker Brothers, when, in one of those beautiful days of September in 1898, with the late lamented Dr. Wedgewood (1), as president of the Maine Academy of Medicine and Science, its members were similarly entertained in large numbers on the twenty-sixth meeting of that organization.

In 1911, our President, Dr. Bennet, collected statistics relative to the County Societies. As it has now been five years since they were given, I thought it would be a good thing to collect them again along similar lines for the purpose of making comparison with those he gave. At that time the County Societies had but recently been organized as units of the Maine Medical, and the American Medical, Association. The first number of the JOURNAL was issued in the preceding December. With the JOURNAL to promptly publish the papers read before the County Societies and incidentally the current events of the meetings, together with the papers read at the annual meeting of this Association, we should expect that the interest in, and attendance at, all of these meetings would be increased. In this we are not disappointed as evidenced by the reports of the secretaries of the County Societies and the increasing interest and attendance at the annual meetings of this Association.

	No. of Physicians in County.	No. of Physicians in County Society.	Percent- age.	No. of Meetings During Year.	Aver- age Attend- ance.
	'11-'16	'11-'16	'11-'16	'11-'16	'11-'16
Androscoggin,	95-76	44-61	46-80.2	9-9	16-18
Aroostook,	76-68	42-53	55-77.9	2-2	35.25
Cumberland,	210-260	124-147	60-56.5	4-4	45-92
Franklin,	26-24	18-17	70-70+	3-3	8-9
Hancock,	48-41	20-27	42-65.8	5-5	8-12
Kennebec,	97-97	60-60	62-62	4-4	20-23

(1) It was thru Dr. Wedgewood that I was induced to use the Poland Spring water as a remedy and I can add my testimony to that of thousands of others as to its efficacy in such cases as it is recommended.

Knox,	42-41	21-26	50-50	6-8	13-12
Lincoln,	22-22	0	0	0	0
Oxford,	57-56	29-42	51-75	4-4	16-22.5
Piscataquis,	28-24	24-22	86-91.6	4-5	12-12
Penobscot,	138-130	57-104	41-80	8-9	30-35
Sagadahoc,	26-18?	18-18	70-100?	4-3	14-10
Somerset,	57-57	22-22	40-40	1-1	15-15
Waldo,	38-38	14-14	40-40	3-3	10-10
Washington,	48-45	26-43	54-95.5	3-3	15-18
York,	117-115	40-72	34-62.6	3-4	25-27
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	1125-1112	559-728	50-69.8	63-67	19-22.7

No return was received from Waldo County. Assuming that this return, if made, would be the same as that given by Dr. Bennet there would be 1112 physicians in the state now against 1125 when he collected his figures five years ago, showing a loss of thirteen physicians in five years. The number belonging to the County Societies has increased from 559 to 728, showing an increase of 30%, while the percentage has increased from 50 to 69.8, or 39%. The number of meetings of the County Medical Societies held during the year has increased from 63 to 67, ranging from one to nine meetings a year in the different societies, while the average attendance has increased from 19 to 22.7 or 19.4%. As physicians are generally looked upon as among our best citizens, should not they avoid inviting criticisms from such persons whenever they come together, especially for the purpose of mutual professional benefit; yet York County Medical Society is the only one I have had the pleasure of visiting of which this can be said.

The members of this society have set an example in conducting their meetings and in securing the co-operation of the lady members of their families in an organization that meets in conjunction with them that is worthy of being tried, for it certainly increases the interest and attendance at these meetings (1).

We observe from a note published in the JOURNAL that the St. Croix Medical Society is in a flourishing condition on account of following the course as laid out by the American Medical Association for its units—the County Medical Societies. Dr. W. N. Minor, the secretary, recommends this course for our county societies. As the

(1) This organization of the ladies of the members of York County Medical Society, the Daughters of Hygieia, expressed thru its president, Mrs. Dolloff, a desire to form a similar organization in connection with the Maine Medical Association. The House of Delegates voted in favor of having it done. Consequently, the Daughters of Hygieia of the York County Medical Society met, at my invitation, at the Lafayette Hotel and formed a State Society of the Daughters of Hygieia. It is proposed that this Society shall meet in connection with our annual meeting and have its own program in which some papers will be read of interest to all its members.

best way of creating interest in a society is by getting each individual member active and taking part in the work for which the society is organized, it seems to me that this course tends to secure this result better than by getting speakers from outside as is now practiced by most of the County Medical Societies of our state.

Forty-two years ago I was elected a member of this Association. This makes my membership longer and my age greater than that of any former president, and I have the honor of being the first specialist ever elected to this office. I have attended every meeting since that time except three, two of which I was out of the state, and at the time of the other one, I was ill. Of the eighty-five papers that I have written upon medical subjects during these forty-two years, nine of them have been read before this Association and published in its transactions. I have also contributed to the discussion of a score of papers read before this Association.

Few of the men who were active at the meeting of the Association forty-two years ago are here with us today. Their number must necessarily grow less every year. Their places are being taken by men who have had greater advantages in the study of the science and art of medicine and therefore they should assume a greater responsibility for its advancement.

It would be impossible to consider in a few minutes the many things which have contributed to that revolution which has taken place in medicine during the past forty-two years. This retrospect will take us back to the time of laudable pus, pyæmia, erysipelas, gangrene and all the conditions prior to the introduction of antiseptic surgery by Lister. Nearly three-quarters of the nineteenth century had passed into history. If from this vantage ground we look across the space of time to see what had taken place to presage these phenomenal changes, we discern in the darkness of medical history one star of the first magnitude representing the discovery of vaccination by Edward Jenner in the closing years of the eighteenth century. In comparison to this discovery we must pass by all others to those of the fourth decade, namely, to the discovery of the method of perfecting the compound microscope by Lord Lister's father; to the discovery of the cause of itch conveyed to Paris by a medical student from Poland; to Paget's discovery of the trichina spiralis which comes from infected pork; and to the vegetable organisms which cause the disease of the scalp known as favus; to the fifth decade to Morton's great discovery of the anæsthetic properties of ether; to the sixth decade to the work of Louis Pasteur and the invention of the ophthalmoscope by Helmholtz and the utilization of its principle in various other instruments; to the seventh decade to the con-

tinuation of the great work of Pasteur and the utilization of the same by Lister in antiseptic surgery; to the eighth decade to the continuation of the great discoveries of Pasteur and the acceptance of antiseptic surgery as taught by Lister; to the ninth decade to the crowning discovery of Pasteur of the cure for hydrophobia, in recognition for which he was presented with the Pasteur Institute; the complete adoption of Lister's antiseptic surgery with its consequent revolution in the practice of surgery thruout the world; Koch's discovery of the tubercule bacillus, his use of tuberculin, his contributions on cholera, typhoid, malaria, and sleeping sickness together with his technique in culture media and the use of differential stains which were the making of bacteriology; to Roux's discovery of diphtheria antitoxin; to the tenth and last decade to some of the epoch-making discoveries, such as the X-ray, which founded an entirely new department in science, radium, which founded another; the law of osmosis with its fundamental explanation of the phenomena of liquids, ion chemistry, the electron (1) or the ion electrified, which is seventeen hundred times smaller than the hydrogen atom; the explanation of the cell activity of the brain, which underlies the process of thought and the analysis of the chemical properties of living matter which carries us closely to life itself.

The discovery of Jenner had stood as a challenge to the medical profession for four score years. If we look for the means which was destined to meet and answer this challenge, we find it was the perfecting of the compound microscope at the close of the third decade of the last century. Although the compound microscope was invented in the sixteenth century, yet it could not be called an instrument of precision. However, the perfecting of this instrument made it so and one of the greatest of any age.

The world is indebted to Joseph Jackson Lister (2), Lord Lister's father, who, as an amateur optician, combined mathematical knowledge with mechanical ingenuity so that he was able to devise formulas for the combination of lenses of crown glass with others of flint glass so

(1) An electron is approximately 6,800,000,000,000,000 times smaller than the smallest object that can be seen by the most powerful microscope made. After listening to an illuminating address by the late lamented Professor Robinson on this subject I submitted a definition to him which he thought gave an approximate idea of this elusive body, namely, Electrons are so small that the distance between them relative to their size is as great as the distance between the fixed stars relative to their size, remembering that light from the nearest one traveling at the rate of 186,000 miles a second takes over four years to reach the earth.

(2) In the life of Lister, the senior, we learn that he was near-sighted, that as a child he was accustomed to glue his eye to an air-bubble that had been imprisoned in window glass which acted as a concave lens and enabled him to see the country more distinctly. Only a genius would be able to make such a discovery. As he grew up to manhood he devoted all his spare time to the study of optics and thus he was able to overcome the obstacles which had baffled the profoundist physicists for nearly two hundred fifty years, for which work he was elected a fellow of the Royal Society, he being the first man known to establish a firm reputation upon an air bubble.

adjusted that the refractive errors of one were corrected, or compensated by the other, thus producing lenses capable of showing an image highly magnified yet relatively free from spherical and chromatic aberrations which had so long baffled the profoundest physicists of that age.

With the perfection of the compound microscope the development of histology to the rank of an independent science was secured, and the development of the cell theory took its place at the pinnacle of the great central generalization in physiology of the nineteenth century. It demonstrated that the cell is in reality the essential structure of the living organism, that every function of the organism is really an expression of a chemical change and in itself a minute chemical laboratory.

It was this combined point of view of the pathologist and chemist, this union of hitherto dissociated forces, which made it possible to discard the old idea of digestion and respiration, and accept in a general way the view that the digestive apparatus and lungs act as channels of fuel supply: blood and lymph channels as the transportation system, and muscles and tissue cells as the consumption furnace where the fuel supply is burned and energy acquired for the purpose of the organism, supplemented by a set of excretory organs through which the waste products are eliminated from the system.

As the peasantry of England before Jenner had known of the curative value of cow-pox over small-pox, so the peasants of that now much distracted country—Poland—knew that the annoying skin disease, known as itch, from which they suffered, was caused by an insect which they had learned to dislodge with the point of a needle, and thereby cure themselves of this distressing malady. This fact was conveyed by a medical student from Poland to Paris near the close of the fourth decade at which time the itch, instead of being a most plebeian malady, was considered a court disease under the name of "*gale répercutée*". Indeed, the imaginative Dr. Hahnemann did not hesitate to assert as a positive maxim that three-fourths of all the ills that flesh is heir to were in reality nothing but various forms of "*gale répercutée*, or in English, "the itch struck in". What makes the discovery of the cause of itch of so much importance and worthy of being referred to here, is that it dropped a brand new idea into the medical profession of Paris, and hence into the world,—an idea destined, in the long run, to prove itself a veritable bomb, namely, that a minute and quite unsuspected animal parasite may be the cause of a widely prevalent and highly important human disease.

Coincident with the discovery of the cause of itch came another

discovery of greater importance by an English medical student, James Paget, who became one of the most famous men of England. It was while he was dissecting the muscular tissue of a human subject that he found little specks of extraneous matter which, when examined under the microscope, were determined to be the cocoon of a minute insect, which was named *Trichina Spiralis*. Here the matter rested for more than ten years, when, in 1847, our greatest American anatomist, Joseph Leidy, discovered the cysts of trichina in the tissues of pork. It was, however, another ten years before it was demonstrated that this parasite gets into the human system thru the ingestion of infected pork and that it causes a definite set of symptoms of disease which had been designated as those of rheumatism, gout, typhoid fever, and other affections. The medical profession was aroused as never before over this subject, the general public became alarmed, and American pork was excluded from some foreign markets. Important as the discovery of the trichina parasite became itself, its greatest importance to mankind was the part it played in directing attention to the subject of microscopic parasites as the cause of disease in general, because in consequence of this discovery the next succeeding years were a time of great activity in the study of microscopic organisms and microscopic tissues.

One of the crowning achievements of this period was the discovery that the very common and most distressing disease of the scalp, known as favus, was due to the presence and growth on the scalp of a vegetable organism. By these discoveries it was fully demonstrated to the medical profession that not only animal but also vegetable organisms directly cause diseases with which mankind is afflicted. This, it is needless to say, was a step forward in the progress of medicine of tremendous and far-reaching importance.

In the fifth decade of the last century there came a discovery wholly American of transcendent importance, when W. T. G. Morton administered sulphuric ether to a patient upon whom Dr. J. C. Warren performed a severe operation, causing the patient to sleep thru the whole of it, and when the operation was over to awake to consciousness without realizing any pain whatever. As the greatest surgeons of the world were of one opinion and had so expressed themselves that such a thing would never be accomplished, the miraculous, the impossible, had been accomplished. This discovery was not only of the greatest importance to the patient and surgeon directly, but it was destined to be of the greatest importance to them from experimental studies carried out, in the most humane manner, on the lower animals.

Some of the earlier workers with the microscope held that the

minute specks which make up the substance of yeast are living vegetable organisms and the growth of these organisms is the cause of fermentation. They also held tentatively the opinion that similar organisms to be found in all putrefying matter, animal or vegetable, were the cause of putrefaction. The great German authorities, Liebig and Helmholtz, stood out firmly against this view, claiming that the presence of micro-organisms in fermenting and putrefying substances was merely incidental.

The studies and experiments that Pasteur entered upon in the sixth decade were aimed at a solution of a controversy that had been raging for more than a quarter of a century. He proved that the minute specks which so largely make up the substance of yeast do all that his most imaginative predecessors had suspected, that without them there would be no fermentation (1). He showed that it was the microscopic yeast plant which, seizing an atom of the molecule, liberates the remaining atom in the form of carbonic acid and alcohol, thus constituting the process of fermentation; that another microscopic plant, designated by Devaine, a confrère of his, a bacterium, acted in a similar way to cause the destruction of organic molecules, thus producing the process called putrefaction.

Pasteur very early in his career distinguished himself in chemistry in studying tartaric acid and a rarer form of this acid named paratartaric, or racemic acid, the former rotating polarized light to the right, while the latter rotated it neither to the right nor to the left. It was known that a crystalline substance may be dissymmetric, that is, may have two forms of crystals, one right-handed and the other left-handed. Ordinary tartaric acid is right-handed, that is, it rotates polarized light to the right; while paratartaric, or racemic acid is neither right-handed nor left-handed; that is, it does not rotate polarized light to the right nor to the left (2).

Pasteur had for his problem the solving of the meaning of this phenomenon. By careful study with the microscope he found on those crystals which turn polarized light to the right, a minute facet, not hitherto described, which led him to think that these crystals were

(1) It has been shown that fermentation may be effected apart from life and has the extraordinary importance in this sense that it promises to elucidate the nature of life itself which may depend upon the sequence of this fermentation. Nevertheless, the fact remains that the fermentation of sugar is the living yeast plant and fermentation in this sense is a vital phenomenon as distinguished from a chemical one. In 1897 Buckner extracted from yeast the very substance of its ferment, the zymaze, separable from the yeast-cells, yet formed within them, as ptyalin is formed within the cells of the salivary glands. The action of zymaze may be stated in terms of molecular physics, the formation of zymaze may be stated in terms of plant physiology.

(2) We can perhaps better understand the formation of this acid by assuming that it is similar to one prism with its apex placed to the base of another of the same strength which would enable a ray of light to emerge on the same plane to which it entered.

disymmetric, or one of a pair, which caused him to search for a left-handed crystal, which no one had ever seen. He rightly surmised that it was locked up in those crystals which had no minute facet upon them and which turned polarized light neither to the right nor to the left. After many trials he finally prepared a solution of this acid and let it crystallize, in which crystals he found the two forms, each having a minute facet making a pair. When he separated these crystals and made a solution of them, one solution turned polarized light to the right while the other turned it to the left. He had thus discovered another secret of nature and had solved the phenomenon of the problem set before him and made one of the greatest discoveries of the age. Under certain conditions one of the two acids may be destroyed by the growth of a bacillus which does not touch the other one, so that polarized light passed thru it will be diverted to the right or left, according to which one of the two acids has been destroyed. This remarkable discovery of Pasteur shows that the molecule of the acid exists in two forms, and this fact enables us to found chemistry in space, or stereo-chemistry, or solid chemistry, which considers the molecule in three dimensions and is achieving results beyond the wildest dreams of man in synthetic compounds such as Ehrlich's invaluable compound of arsenic, called salvarsan, or 606. In studying this subject we are better able to appreciate, not only the nature but the possibilities of stereo-chemistry as promulgated by Pasteur, to whom as a genius in making this discovery, we must accord the honor of having discovered the method of making discoveries.

In applying the principles of this discovery to help a grocer out of trouble, he found that a blue mold feeds upon the acid of the left hand, leaving the right hand behind, thus causing polarized light to rotate to the right. This gave him the key to the true nature of ferments. As the scope of his work widened he became at different times a doctor of wines, vines, silk-worm disease, chicken cholera, swine, sheep, cattle, and finally of human beings.

It was his work on chicken cholera that led him to the greatest of all his discoveries and finally answered the challenge made by the discovery of Jenner in the last years of the eighteenth century. He had advanced from making cultures of all known germs in a test tube to the attenuation of cultures and to the supreme discovery that an attenuated culture is able to confer immunity against another culture at full strength.

Pasteur found in keeping the cultures of germs of chicken cholera that they lost strength and by this means he could prepare and stock a graduate series of cultures in every degree of strength from full viru-

lence to non-virulence. With these attenuated cultures he could produce in a chicken a mild attack of cholera, which would render the chicken immune against an attack of the full virulent culture. This discovery was an explanation how cow-pox protected man against small-pox, and indicated that the method could be extended to other diseases of a similar nature.

This inference was soon to be verified, for in February of that memorable year of 1881, Pasteur again announced to the French Academy of Science that he had produced an attenuated virus of the germs of anthrax by which he could protect sheep and cattle against that disease. As this announcement meant the saving of millions of dollars to France, a president of an agricultural society immediately challenged it by proposing to furnish Pasteur fifty sheep for the test. The challenge was immediately accepted by Pasteur, who substituted two goats for two of the sheep and allowed ten cattle to be added. He divided the sixty animals into two lots of thirty each, and on the 5th and 11th of May he vaccinated one lot with an attenuated virus of anthrax as a protection against anthrax, and on the 31st he vaccinated both lots of thirty each with an extremely virulent culture of anthrax which had been in his laboratory for years. On the 2nd of June a vast crowd had assembled to witness the closing scenes of this test which had become world wide in interest. What they witnessed there on that farm in France was dramatic in the highest degree! All the animals not protected by the attenuated virus of anthrax were dead, while those which were protected on the 5th and 11th of May were moving about the farm as if nothing had happened to them. This was a scene that amazed the assembly, and it was heralded far and wide over the world that a new era had dawned in medicine.

This was not the only benefit to come from Pasteur's work on anthrax, for two years previous to this time he had proved by the mere examination of a drop of blood that a woman supposed to have died from puerperal fever had actually died of anthrax, and Sclavo, a worker with Pasteur, had developed a serum treatment for anthrax in man, so that not only animals but man had also been relieved of the scourge of this disease.

I was in Europe at that time, but missed witnessing this test on account of the sickness and death of one of our party, the lamented Dr. N. A. Hersom of this city. I did, however, have the pleasure of meeting Pasteur at the Seventh International Medical Congress, held in London in August, and witnessing one of the greatest ovations ever given to man. It was at the opening meeting of more than three thousand men from all parts of the civilized world, when the student

of trichina fame, Sir James Paget, the President, in the course of his eloquent address referred in appropriate terms to the great work of Pasteur, to whom he had turned to his right to face. At the conclusion of this reference by the President the assembly rose, en masse, and gave cheer after cheer, with the greatest enthusiasm, for many minutes; all the time the modest Pasteur stood smiling and bowing in acknowledgement.

Pasteur, at this time, was already far along in his experimental studies of rabies, in which one complexity after another had to be unraveled. The microscope or the ultra-microscope had failed to reveal the living organism which causes it. Therefore, he finally adopted the theory that rabies must be studied, not in the saliva or blood, but in the brain and spinal cord. In this way he was able to obtain the cause of the disease and standardize it and its use upon animals in a similar manner to the method employed in chicken cholera and anthrax.

The revelations involved in this and similar researches has thrown much light upon the influences brought to bear upon the microbe, so that their virulence can be enhanced or attenuated by passage thru bodies of highly susceptible or highly refractory host, from which have preceded the researches to which we owe the antitoxin of diphtheria, the inoculation against plague and typhoid fever, the serum treatment of tetanus, and cerebro-spinal meningitis, and the various microbic preparations now found to be of value in surgery.

After having treated successfully chicken cholera and anthrax, and having treated hundreds of animals successfully against the infection of rabies by a protective virus as obtained from the spinal cord of an animal which had died of rabies, the time had come to apply it to a human being, when an Alsatian boy who had been badly bitten by a mad dog came with his mother on July 6, 1885. The boy was successfully treated and became an employe at the Pasteur Institute (1). Then in October came a young shepherd who, in protecting others, got badly bitten by a mad dog. He, too, was cured and became an employe at the Institute. The cure of these two cases caused people, who had been bitten by mad dogs, or other animals, to rush to Paris from every part of the civilized world and thousands were rescued from the terrible death of hydrophobia.

It is a singular coincidence of life that it was Lord Lister's father who, as an amateur optician perfected the compound microscope which

(1) In 1888 many nations joined with France in showing their appreciation of the great services of Louis Pasteur, by presenting him the Pasteur Institute which typifies his career by having on its walls of rare marble the names of his great discoveries, interspersed with figures of dogs, fowl, sheep, and cattle, and intertwined with wreaths of vines and mulberry leaves. In the vaulted arch, beneath which he now rests, are four angels, representing Faith, Hope, Charity, and Science.

was absolutely necessary for Pasteur to make all his discoveries; while on the other hand the epoch-making discoveries of Pasteur were equally indispensable for Lister to develop antiseptic surgery.

It was Lister's father's skill with the microscope that engaged his attention early in life and made him so skilful in its use. Thus we see the great importance of the microscope and the indispensable part it played in the career of both of these men, and likewise the indispensable part it played in the revolution that took place in the practice of medicine in the nineteenth century.

It is impossible for anyone who did not live thru these times to realize the condition which existed before this revolution in the practice of medicine took place, or to know that tremendous opposition to antiseptic surgery for more than a dozen years, which had to be met and overcome by Pasteur and Lister. They were attacked by the foremost men, not only in medicine, but in the church; but they had found the truth and based their action upon it, and this gave them the power to overcome all opposition (1).

Lister's studies with the microscope with his father and Sharpey, and his long service with the ablest men in London and Edinburgh, had prepared him for the practice he was to encounter when he left Syme in Edinburgh and went to teach surgery in Glasgow. The wards of the Glasgow Infirmary, tho recently built, were dirty and gloomy. The patients from the squalid alleys and factories had but little resistance to the encroachment of pyæmia, septicæmia, erysipelas, and gangrene, which were so rife in the Infirmary, and at times became alarmingly epidemic. This condition was common to all hospitals in those days, no matter how well they were ventilated. Those scenes of repulsive horror and sights of agony, in which two out of every five that had an open wound died, defeated the objects for which the Infirmary was founded, and stirred the tender nature of Lister profoundly. They were so familiar that they were met with that stoicism which men rightly assume toward that which is inevitable.

Lister had the faculty of making himself strange to the familiar. He was taught that putrefaction in wounds was due to the oxygen in the air, but he questioned it by the sole right of his genius and judged it by the measure of his own insight and power, when he saw Pasteur's

(1) In accomplishing this revolution, Florence Nightingale performed a prodigious task when, as soon as the Crimean War broke out, she took a body of nurses to Scutari to take charge of the barracks hospital. Her ministrations and reforms became known thruout the world by her "Notes on Hospitals" and by her "Notes on Nursing". She perceived from the first that hospitals should furnish a training for nurses just as much as a training for doctors, and her life stands for the accomplishment of the trained nurse who has contributed much towards revolutionizing the practice of medicine. Her work was so unique in its inception and so humane in its execution that it has received the greatest attention of historians and poets, among whom was our Longfellow who immortalized it and her in verse.

work in the light of a first principal thru the understanding of the vitality of tissues as a means of relief to humanity and the betterment of the science and art of surgery.

Clinicians and students with the microscope had been forging a chain of evidence connecting diseases of this world with the germs of an invisible world, the final links of which Pasteur, by his masterful discoveries and experiments, had so far completed that it remained for Lister to weld them all together and use the chain of evidence effectively to revolutionize the practice of surgery. Lister seems to have been the only man to have grasped the meaning of all this chain of evidence. Other men knew what had been done, and doubtless what Pasteur had done, but Lister had a genius for a father, who, possessing profound mathematical knowledge and great ingenuity in optics, was able not only to perfect the compound microscope, but to become an expert in its use and imbue his son with its great possibilities in his youth when his active mind was eager to grasp all that came within its range and make it his own. This undoubtedly was the secret of his success. He had been taught to use the microscope with that mathematical precision with which it is constructed at an age when such instructions became as fixed and as rigid in his mind as the pictures on a photographic plate. This acquisition became a standard for all his subsequent mental activities. He thus knew when examining a subject whether his vision was clear, and if he could not interpret the meaning of what he saw he was not content, and bent all his energies to find it out. It was this training of the mind with which he viewed the subject of simple and compound fractures of bones.

With an equal amount of injury, the one without the skin being broken went on to rapid recovery, while the other with the skin broken, there was apt to be pyæmia, septicæmia, gangrene, and death. What was the cause of this difference? If he examined the discharge under the microscope he found organisms of the invisible world. He was told that these were incidental to the inflammation which was caused by the oxygen of the air. He questioned it. His mind had been so trained that when he could not find an explanation for what took place, he considered it a mystery, but he did not accept the mystery and allow it to become familiar with him. He was in advance of the weight of authority in acknowledging the mystery, as they were indifferent to these diseases as mysteries. He searched the authorities for their philosophy as to the cause of these diseases, but he found none because they had none. His trained mind and philosophic temperament challenged these mysteries. He was discontented in making his reports to have to record deaths so often from these diseases, and so he inaugurated

the most scrupulous cleanliness, because in his work upon inflammation he had seen how various substances had diminished or destroyed the vitality of the tissues.

It may seem strange that cleanliness which for thousands of years had been proclaimed as next to godliness should not have been practiced by surgeons; but the facts are that doctors did not pay so much attention to cleanliness as other men because they allowed themselves to become familiar with unclean things. The conditions of the offices of physicians of repute would not be tolerated today,—bowls and towels were used so long that it was difficult to tell what was their natural color. In operating, but little preparation was made; sometimes the hands were not washed; and the silk that was used for sutures was hung over the surgeon's coat button, while the needles were stuck into his dirty coat. The instruments were washed with soap and water after the operation, but seldom before it was begun. This, in brief, is an outline of the conditions that existed forty-two years ago.

Notwithstanding, Lister introduced into the wards of the Glasgow Infirmary the most scrupulous cleanliness with every one connected with the service, with clean towels and dressings and a lavish use of deodorants, still there was no marked reduction in the occurrence of blood poisoning and deaths. The mystery increased, and still he felt the cause of it was something conveyed to the wound. When he read Pasteur's work he learned that the oxygen of the air was not a component part of putrefaction; that certain microbes causing putrefaction could actually live, like fish, without free oxygen, and died when exposed to it, while others lived upon the surface and took their oxygen directly from the air. This accounted for the existence of superficial and deep putrefaction, the only requirements being that the microbes should have access to the matter capable of producing it. This knowledge supplied the missing link of the chain of evidence he had at his command and gave him the working basis for eliminating the microbes from all wounds, whether accidental or operative. His long studies with the microscope, together with his clinical experience with diseases had prepared him to see this missing link of evidence thru an understanding of the vital forces which play such an important part in health and disease. It revealed the uniqueness of his profound philosophy among all the medical men of his time, and was the turning point in his career which revolutionized the practice of surgery.

Lister found the question of ligatures in antiseptic surgery was one of the greatest importance, as the method introduced by Ambrose Paré was a source of annoyance and of infection. After making hun-

dreds of experiments and careful observations, he finally devised the catgut which is in universal use today.

In 1881 it was my privilege to attend Lister's Clinic at King's College Hospital, watch his methods, and examine his cases. His method of preparing himself for an operation was simple. After removing his coat, he rolled up his sleeves, washed his hands with soap and water, and rinsed them off with boiled water. He put on an operating coat and an apron to protect his clothes. He then dipped his hands in a five per cent. solution of carbolic acid, bathing his wrists and arms with it. Lister's hands were clean and his finger nails were cut close and kept clean. He did not even scrub his hands nor use a nail brush in preparing for an operation, neither did he use gloves, cap, or muzzle. He regarded all these as superfluous. He said, "This same five per cent. solution of carbolic acid is what we use for purifying our instruments, our hands, and the skin of the patient. For instruments it is very much more convenient to be able to purify them by a solution like this than to boil them as is sometimes the fashion at present. For private practice it would be a most troublesome thing to boil your instruments."

In one of his lectures he said, "Of all those who use antiseptics in surgery I suspect that I apply them the least to the wound. After the first dressing the object which I always aim at is to have the material in contact with the exposed tissues approximate as closely as possible to the perfectly bland and neutral character of the healthy tissues." After cleansing the parts operated upon with boiled water, he bathed them with the five per cent. solution of carbolic acid. His aim in dressing a wound was to keep the irritating effects of the carbolic acid away from it, and after many experiments carried out in the most careful manner for years, he found he could do so by placing over the wound an artificial non-putrifying scab made of gauze impregnated with double cyanide of mercury and zinc. The skill of Lister in the after-treatment of the wound was shown in the results obtained,—results which were very noticeable in his wards which had been continuous for years and which have never been surpassed by any subsequent modification of his methods.

Lister, at that time, was using the carbolic spray which he had adopted without making a series of tests with and without it to determine whether its use led to more perfect results. The use of the spray prejudiced many against Lister's methods, for it interfered with the operation and was spectacular in its appearance. It was cumbersome and did not comport with the character of Lister—a man of great simplicity. I could see by the expression of his face that it was an

annoyance to him to have a thoughtless student ask if "the donkey engine" was working all right. Lister said at that time that the spray was the least important part of the antiseptic method because putrefaction so apt to occur in wounds not treated antiseptically is due to septic matter in concentrated form rather than to that which exists in the air. After becoming convinced that the spray was not necessary he discontinued it with an acknowledgement characteristic of the man, namely, that he felt ashamed that he had ever used it or recommended it for the purpose of destroying microbes in the air. Upon discarding the spray Lister's method of operating and after-treatment became as simple as it is possible to make them with that efficiency with which he obtained results that revolutionized surgery. It is on account of this fact that the details should be referred to, lest we forget of what Listerism consists. What does this mean to the average man in our profession who must, at least, do emergency surgery? It means that if he will follow Lister's method in every particular, he will secure the best results that it is possible to obtain.

Lister repeatedly said at King's College Hospital that it is of the greatest possible importance that the preparation for an operation should not be made unnecessarily complicated. He said that a five per cent. solution of carbolic acid had a powerful affinity for the epidermis, penetrating deeply into its substance and mingling with fatty materials in any proportion. It accomplished in a few minutes all that is necessary to prepare any part of the body for an operation. "Corrosive sublimate solution" (I am using his own words) "on the other hand, cannot be expected to penetrate in the slightest degree into anything greasy; and therefore, as the skin is greasy, those who use corrosive sublimate require elaborate precautions in the way of cleansing the skin—treating it with oil of turpentine or ether, not to mention soap and water to remove the grease, which they feel it is essential to get rid of for the efficient action of the corrosive sublimate. Now all this is unnecessary care if you use carbolic acid. I can testify to this from an ample experience. For my part I do not even use soap and water. I trust to the carbolic acid which by its penetrating power and great affinity for organic substances prepares the integument as corrosive sublimate cannot."

In regard to the after-treatment of wounds, he finally said: "Any material that is merely aseptic, such as cotton wool, or gauze, sterilized by heat, having nothing in its substance to check in any degree the development of microbes, will allow the septic evil to spread freely to the wound from the external world if blood or serum happens to penetrate at any point to the exterior. In addition to this fatal objec-

tion, such a dressing has other disadvantages. The necessary sterilizing apparatus, tho it may be provided at a public institution, cannot well be at the disposal of private practitioner, and further, the merely aseptic material having no power to correct any accidental defilement, must require an almost impossible degree of care in its manipulation. I have seen this system in operation in very able hands with results by no means satisfactory." Lister, true to the earliest teachings of his father, could secure his results with mathematical exactness, while those who do not follow his methods in their entirety do not have any such security. Professor Von Bergmann of Berlin was the chief champion of the so-called aseptic method now in such universal use. At the International Medical Congress held there in 1890, he reserved for Lister's inspection some cases of removal of the breast as example of the aseptic surgery. As he rolled back the dressing to reveal the superiority of the advanced aseptic method carried out with the exactness of laboratory work with which he had become possessed and with which he exultingly expected to show superseded that of the great Englishman, everybody stood on tiptoe of expectation; but what was revealed? In the first case, in the second case, and in fact in all the cases, as it so happened to his amazement, not a sweet clean wound in any of the cases, but the old picture of suppuration and decomposition, because, as Lister said, there was no antiseptic such as his double cyanide of mercury and zinc gauze to kill the infection at its birth and protect the wound from further infection. This demonstration of Professor Von Bergmann proved to be one of the greatest at the Congress, not, however, for his advanced aseptic method, but for Lister's antiseptic method. If one chooses to practice the elaborate technique of Von Bergmann, he should not neglect Lister's antiseptic precautions in dressing the wound if he desires always to have his results compare favorably with those of the master.

In a review of Lister's career by a professor of surgery in one of the leading Universities in 1908, we read: "Suffice it that time brought important modifications in his practice, but not in his theory. Particularly antiseptics came and went, the carbolic spray was used and was banished. Air was found to be not a dreaded enemy and carrier of disease, but a kindly friend when properly entreated; surgical cleanliness, a germ-free environment, became recognized as the one thing needed. Heat, soap and water, the nail brush, alcohol, and a few simple chemicals, took their place in the armamentarium, and asepsis supplanted antiseptis. But the great underlying truth remained,—that wound infection comes from without the wound, that it flourishes under appropriate conditions, that it may be eliminated by appropriate

measures." This is a fair sample of what may be found in many of the text books on surgery. It shows that what Lister taught and practiced is not understood. Many of Lister's devoted followers did not become fully imbued with the wonderful simplicity of his method. Those who employ it faithfully have the greatest assurance that their results will equal, if they do not exceed, those obtained from any other method, no matter how extensive or complicated it may be.

In commemoration of Lister's eightieth birthday it was considered that no memorial could be more appropriate than a collection of all his published works in one volume. It met with his approval and the committee appointed had a great opportunity to place in the hands of every medical student and practitioner a manual of surgery from the writings of the master. They missed this great opportunity and produced an expensive edition in two volumes (1) for the shelves of special libraries. This defeated the great object of affording every student of medicine learning at first hand the efficiency and simplicity of Lister's methods.

When France was called upon to express in a popular vote the opinion as to who was the greatest Frenchman, Louis Pasteur received an overwhelming majority. When England was called upon to perform a similar act, the people did not select Joseph Lister, but William E. Gladstone, who, tho great in state affairs, it can be said without any disparagement to him, that his contributions to the welfare of humanity were not one-millionth part of that of Lord Lister.

Pasteur and Lister were so endowed by nature that they were not only able to make the greatest discoveries the world has ever witnessed, but they were possessed with that great competing ability which overcomes all opposition to the truth of their discoveries and made them so effective in all of the affairs of life. Others had glimpses of the great truths they made so effective. Our own distinguished Oliver Wendell Holmes was the first to announce that women in childbirth should never be attended by a physician who had been conducting post-mortems, or attending cases of puerperal fever or other contagious diseases, because puerperal fever could be produced or conveyed in this way. His first paper, "On the Contagiousness of Puerperal Fever", read before the Boston Society of Medical Improvement in 1842, met with a tremendous opposition, but this did not prevent him from returning to the subject in 1855 in a monograph on "Puerperal Fever as a Private Pestilence", in which he reiterated his views and stated that Semmelweis had lessened the mortality of puerperal fever by disinfecting the hands with chloride of lime and the nailbrush, in

(1) At first these two volumes were \$13.00. Now the same edition is \$7.50.

one of the maternity departments of the general hospitals of Vienna, where deaths from this disease had become so great that women begged in tears not to be taken there. Altho Holmes anticipated Semmelweis by five years, yet the superiority of Semmelweis' work, and the stiff fight he put up to make it effective, together with the all-important fact that he recognized and asserted that puerperal fever is a blood-poisoning disease, makes him the pioneer of antiseptics in obstetrics. Notwithstanding that by these antiseptic methods he reduced the deaths from puerperal fever to nearly the vanishing point, he was so persecuted and ostracised that his sensitive nature gave way, and he died insane—a martyr to the cause of antiseptic midwifery.

In Lord Lister's triumphant tour thru Austria and Hungary he learned at Pesth the history and fate of Semmelweis, who fought the unseen enemies of disease with weapons similar to what he had employed, tho not supported by the scientific evidence which Pasteur had given him. Lord Lister recognized and praised Semmelweis' great work and acknowledged he was his forerunner in antiseptics. He always personally expressed his indebtedness and gratitude to Pasteur, and Pasteur in return was equally grateful for the extension of his work by Lister.

In this work with Lister for a leader, Pasteur had powerful allies, but their efforts were concentrated upon surgery alone, while his teachings went far beyond the revolution which was going on in that department of medicine. Pasteur's efforts were concentrated upon bringing to view a wider truth that specific germs are indeed the cause of specific diseases.

Pasteur showed that the minute round organisms growing in masses in acute abscesses, boils, and infective osteomyelitis of children, were the cause of the disease; that therefore osteomyelitis is a boil in a bone, and he asserted without reservation that these micro-organisms were the most common cause of infection among women after confinement. At that time even, it took a tremendous amount of courage to make these assertions, notwithstanding the pioneer work done by Holmes and Semmelweis. One day at the Academy of Medicine in 1878, one of the most popular essayists of the day was discussing the causes of puerperal fever, when Pasteur was permitted to interrupt him, and said it was not caused in the manner he had indicated, but by a microbe. When the essayist said he was very much afraid that nobody could ever find this microbe, Pasteur went directly to the blackboard and drew a picture of it, saying, "There, that is what it is like." This is how he had to fight and beat the doctors of the old school and have the truth accepted and put into practice.

Koch, a pupil of Pasteur, first showed tubercle bacillus at the Seventh International Congress held in London in 1881 and said: "Henceforth, in our warfare against this fearful scourge of our race, we have to reckon, not with a nameless something, but with a definite inmate of the body: its condition of existence is for the most part already known, and can be further stated. Before all things, we must shut off the source from whence the infective material comes, so far as it lies in the power of man to do this." The next year he published an account of this great discovery. All who were practicing medicine in 1890 remember what a profound impression was made when he first announced the use of tuberculin. And altho that first use was disastrous in some cases, the indications for its use have been so carefully studied that it is now in general use for a large proportion of cases with good results. Beside Koch's work on tuberculin, his contributions on anthrax, wound infection, cholera, typhoid, rinderpest, malaria and sleeping sickness, were of the highest importance. His technique in culture media and the uses of differential stains were the very making of bacteriology.

Twenty years ago the lamented Dr. Pendleton, as President of this Association, in his address referred to the death of Pasteur which occurred the year before, and said: "What a triumph for our age when the new science shall have baffled such enemies of our race as diphtheria, the plague, and cholera! Reports from Japan and India and experience at our own doors, confirm our hope that this may all be accomplished". And so it has long since been accomplished. Roux, a pupil of Pasteur, had announced in 1894 the discovery of diphtheria antitoxin, but it had not got into very general use in 1896, tho Behring and Kitasato had immunized animals against diphtheria several years before this time. When, however, it was fully realized that antitoxin would control virulent diphtheria, it was one of the greatest sensations of a sensational age.

The Massachusetts General Hospital provided hospital accommodations for all New England for years. The agitation for one in Maine assumed a substantial form when in 1867, Dr. Samuel H. Tukesbury, as President of this Association, advocated the establishing of a general hospital in Portland. After years of effort in which Dr. John T. Gilman took a very active part, the Maine General Hospital was established and opened for the reception of patients a few days before the beginning of the year 1875. It was my good fortune to have been elected House Doctor for that year, as I came directly under the instructions of the eight famous physicians and surgeons who consti-

tuted the original staff, only two of whom, Dr. Gordon and Dr. Thayer, still survive.

Ten years after that time I founded the Maine Eye and Ear Infirmary, the second institution of the state founded and opened for the treatment of patients. A few years later the Central Maine General Hospital at Lewiston, and the Eastern Maine General Hospital at Bangor, were established. Since that time many hospitals have been established, so that now nearly every community of any considerable size has hospital accommodations. All of these hospitals keep careful bedside records of cases which are filed away for reference. If the cases could be grouped together and a brief outline of the character and treatment given, together with the results, in the MAINE MEDICAL ASSOCIATION JOURNAL, it would be of great value to the medical profession of the state and tend to stimulate a healthy competition in the work of the several institutions.

At first it was very hard to get people to go into the Maine General Hospital, partly because they thought they were as well, or better off at home, and partly on account of the bad reputation hospitals had gained when pyæmia, septicæmia, erysipelas, and gangrene, were so common, before the work of Pasteur and Lister had been established.

There has been much said and written about the use and abuse of hospitals. Like any other question, it will never be settled until it is settled right. The important question, then, is: What is the best solution of the hospital question? Should any person able to pay for the treatment they may need be treated free at any hospital supported by public contributions and state aid? Certainly not, no one who has a proper conception of the subject will attempt to make an argument in the affirmative. The question then is: How shall we ascertain who are able to pay? Shall we take the patient's statement as a guide as to his or her ability to pay? Or shall we rely upon the statement of others who may be interested in the patient as a friend, or on a financial basis?

Experience teaches that neither of these methods are wholly satisfactory. The question arises at once: Is there any other method which will prove more satisfactory? Yes, the method first introduced and practiced in New York, which makes it a misdemeanor for any person to obtain treatment at a charitable institution under false representation of their ability to pay. This law is printed in plain type on the back of every card given to persons who seek charitable treatment. It reads as follows: "This dispensary has been licensed by the State Board of Charities. Any person who obtains medical or surgical treatment on false representation from any dispensary li-

censed under the provisions of this act shall be punished by a fine of not less than ten dollars, and not more than two hundred fifty dollars. (Imprisonment until fine is paid may be imposed.)"

In regard to the efforts made to obtain a law similar to this in this state, it is on record that at a special meeting of the Cumberland County Medical Society, which I as president called, it was unanimously voted to have such an act, designated by this meeting the "Medical Charity Act," presented to the Legislature. Accordingly, this was done at the session of the Legislature in 1913. A hearing was held before the committee to which it was referred and at which it was urged that this "Medical Charity Act" is promulgated on the principle upon which the pure food law is based: that not only no one worthy of charity would be debarred from obtaining it, but those who did deserve it would be more efficiently and economically cared for, because the service would be limited to those for whom it was intended. It was shown that the law was in active operation in the great State of New York, and had been found to make medical Charity more efficient and economical, therefore it was in great favor with not only those who contributed to maintain medical charities, but with those whose duties it is to administer them. The committee, however, saw fit to report the act as "inexpedient". We have been in correspondence with the State Board of Charities and Corrections relative to this law, and we hope the members of this Association here will make it manifest that they are in favor of having such a law put upon our statutes in this state. It has also been made a law in the State of Connecticut. After a careful consideration of this subject for many years, I am convinced that the New York law is one of the best means at our disposal to deal with the question whether a person is able to pay for the treatment he may need (1). If by this method the patient states that he or she is able to pay for board and nursing and a fee for medical and surgical treatment, this fee should be paid to the one who renders the service, notwithstanding, it has in some instances been paid to the hospital, because a physician or surgeon agrees to give his services to the poor only who are unable to pay; and when a hospital obtains a fee for that service, then that service has been rendered for a purpose for which it was not intended and which the physician or surgeon did not agree to give, and which he cannot consistently give if he acts in duty bound to himself, to the hospital, and to the medical profession of which he desires to be an honorable member.

(1) Of course there are many factors in this problem to be considered in deciding whether a person is able to pay for the treatment he may need. The problem as a whole is too complicated to be considered in this address. There is a great deal being written upon the subject towards establishing a standard for our guidance in determining the conditions of those who should be treated free. When, however, this standard is established and is generally made known it will facilitate matters to have a law like the New York law in every state.

As to the promise of the future in medicine (1), we have seen how Lister's antiseptic surgery has enabled the surgeon to advance from the limb to the trunk, from the abdomen to the head, and from the head to the vascular system, and invade the heart itself, until it would seem that the knife had reached its limits as a panacea within the bounds of the body itself. From these great achievements we may discern that the next stage will depend upon the fact that the further application of the very discoveries which made these achievements possible are destined to supersede them. Take for instance the surgical tuberculosis of the knee joint. Surgery steps in, removes the disease, and restores health, but not without loss of functions. How much better to prevent that disease which not only invades the knee joint, but every other part of the body, and destroys millions of people every year. Pasteur said that it was within the power of man to rid himself of all microbic diseases, and he did more for science than any man that ever lived to bring this about. The very one who discovered the tubercle bacillus, by his rashness, did much to prevent the early extermination of tuberculosis, when at the beginning of this century he announced in London his conclusions that the bovine form of tubercle bacillus is innocuous to man, and that therefore we need not take precautions against it. Lord Lister, who was present, forcibly dissented from this assertion and the question was immediately put into the hands of an independent commission which considered it for more than ten years. Finally, they rendered a decision which is a credit to Great Britain. It is being quoted by health officers in their struggles for better conditions against the vested interest thruout the world. During all these years while the investigation of the commission was going on, no satisfactory progress toward preventing tuberculosis was taking place, because of this assertion of Koch, but for the past few years this obstacle has been removed by the decision of the commission which presented evidence after evidence that could not be controverted, that the bovine bacillus causes tuberculosis in the human being. This means if we wish to use milk, which seems so indispensable for the rearing of the child, that we must abolish tuberculosis from our cows if we are ever to abolish it from ourselves. Pasteurizing milk is a

(1) Nothing is intended to be said here in disparagement of the great achievements of surgery, but like anything else that is capable of doing good, it is also capable of doing harm if not rightly used. To those who know the truth this is illustrated in ophthalmic surgery, especially in operations upon the muscles of the eye, which on the whole do a great deal more harm than good. The same may be said in regard to some abdominal surgery. This phase of the subject is brought out in the illuminating discussion of Dr. O'Neil's paper by Dr. Robinson at the meeting at Poland Spring, the gist of which is conveyed in quoting the old song our grandfathers used to sing:

"John Barleycorn, they buried him; put earth above his head;
Then swore an oath, a solemn oath, John Barleycorn was dead;
But when the spring came on apace, and rains began to fall,
John Barleycorn sprang up again, and so surprised them all".

prevention of infection if done properly, but it does not protect us against infection thru butter, and the only way is to standardize the rearing and keeping of cows to make them immune to the disease and destroy those that become infected. On economic grounds alone it does seem that the expenses of a national insurance act, such as that inaugurated in Great Britain, would be so great that adequate provision would have been made for preventing those infectious diseases which can be prevented, but it was not done. The knowledge now possessed about this brutal disease, tuberculosis, is sufficient. It now only requires the right kind of health officers backed by a public sentiment with sufficient means to exterminate it and thereby do away with the surgery connected with it.

The proper administration of antitoxins in diphtheria has practically done away with the operation of tracheotomy, formerly so frequently done to save life.

In regard to that exceedingly common disease, appendicitis, many thousand noted authorities say that no pathologist or bacteriologist would hesitate to assert that in the not remote future we may expect to define the conditions in which appendicitis arises and to state the dietary precautions which are necessary to prevent it. Further, they say that even before we have learned to prevent it, the bacteriologist will be able to provide us with a microbic production in the nature of a vaccine or serum, or an antitoxin, which will control the inflammation in its earliest stages and render the use of the knife superfluous.

The illuminating reports made by Professor Whittier, the Chairman of our Committee on Venereal Diseases during the past five years, show how widely spread and what a peril these diseases are to life, and the enormous amount of surgery they occasion, especially in women. Authorities assure us that in time, with sanitary measures and prophylactic treatment, all this surgery will be eliminated.

Altho cancer is probably not a microbic disease, still in most of its varieties the cause remains unknown, and the same may be said in regard to malignant tumors and their more innocent allies. Still remembering the methods by which hydrophobia has been prevented, we must be encouraged by the assurances of those who are steadily working on a cure for cancer, that it may be solved in a similar way to that of hydrophobia, which was accomplished without knowing its cause. A discovery may be made any time which will banish the knife from this field of surgery (1) forever.

(1) I have a letter and literature from Dr. Henry Smith Williams, the great American author and investigator, upon whom I have learned to rely, that autolysin is accomplishing much in this direction.

Altho for years sera have been prepared from the common forms of coci and used in cellulitis, mastoiditis, puerperal fevers, peritonitis, and erysipelas, yet none of these have approached in efficacy to that of antitoxin in diphtheria; nevertheless, from what has been done we are in a state of expectancy and feel that the subtleties of chemistry may be made to yield remedies which will put the whole range of surgical inflammations rapidly and safely under their control. Indeed, between the chemist and bacteriologist the promise is not so far distant when with specific remedies all these maladies will be carried over (1) into the realm of medicine and leave the surgeon's knife to be used only for deformities and accidents (2). It is needless to say that the extent of both these conditions will be largely changed, the first by the practice of eugenics, and the second by the wise application of public instruction of how to prevent accidents, first begun and carried to such perfection in Germany. Altho the promise of the future discards the knife so completely from the healing art, yet the principles of anti-septics, as taught by Lister, are eternal, and will be in use as long as births occur and mothers need that protection which can be given only by their employment. This practice will ensure not only the greatest safety to the mother and child, but incidentally prevent a large amount of blindness which is a disgrace to our civilization. While we have just intimated how deformities may be diminished in the future, this result is but one of many which will be accomplished by the practice of eugenics. It is for this reason that physicians should become familiar with this subject and be able to give intelligent advice. Altho the word was introduced by Francis Galton, the Founder of Eugenics, it has but recently come before the public. It represents a practice, however, many centuries old.

(1) The practice of medicine in this country is destined to change to correspond in some degree to that which was inaugurated in England in 1911. In conversation with Dr. Ernest Hart (an English surgeon whose father was the founder of the British Medical Journal) who was recuperating at Bar Harbor from his strenuous service on the continent and who attended the meeting of the Hancock County Medical Society when I visited it and read a paper before it, I learned that four-fifths of the doctors in Great Britain accepted service under the British National Insurance Act of 1911, that it reduced the cost of medical treatment to the minimum, that it was much more efficient, and that it was the means of developing a wonderful philanthropic spirit among the people. The practice of caring for a group of people in this country in connection with corporations, at institutions of learning, or by each of a fraternal group paying a specified annual amount for medical service, is encouraged by many men among whom may be mentioned Dr. Richard C. Cabot, Professor of the Practice of Medicine in Harvard University.

(2) Sir Almroth Wright said "The physician of the future will be an immunizer". Of course it must be remembered that an immunizer cannot be successful in the practice of medicine unless the metabolism of the system is efficient enough to enable it to respond to such treatment. As this efficiency depends so largely upon the secretions of the ductless glands whose potentialities are just beginning to be known, the physician of the future will have plenty of problems to solve. We were highly entertained last year by the illuminating oration bearing upon this subject by Dr. Bainbridge of New York, who is constantly making additions to our knowledge upon this subject. In 1914 he gave a banquet at the Biltmore to members of the International Surgical Society of Belgium, at which Dr. Hertaghe of Antwerp, the discoverer of myxodæma, gave a remarkable address upon this subject which was discussed by his guests, among whom was the renowned Dr. Sajous of Philadelphia, whose exceedingly valuable and instructive writings for the past score of years have added much to the renown of American medicine.

Let us briefly refer to an obscure German bishop who became the father of kings and queens. The story is about seven brothers who in the sixteenth century inherited an estate on the borders of the Black Forest, which, if divided, would have little importance. The brothers after due deliberation decided that only one of their number should marry and that the other six should work for the interests of the estate with no reward except the consciousness that they added prestige to the family name. The children of the sixth brother made among themselves the same compact, and the lot fell upon one Ernest Augustus, Bishop of Osnabrück, who was able to win for his wife a very remarkable woman—Sophia of Palatine. There was, however, a break in this compact, and consternation reigned for a time, for one of the brothers married and had a daughter. Sophia Palatine, after a time, united the family interests by marrying one of her sons to this daughter of her husband's brother, and these cousins were the grandparents of Frederick the Great and his distinguished fraternity. They had thus practiced inbreeding by marrying cousins, restricting the number of births and conserving the family estate. The sequel of this remarkable practice of eugenics is that the son of the Bishop of Osnabrück became George I of England, their daughter became Queen Sophia Charlotte of Prussia, and their direct descendants today occupy the thrones of England, Germany, Russia, Denmark, Norway, Greece, and numerous other principalities. This remarkable result comes from the application of the same laws of heredity which are employed in breeding domestic animals, which can be accomplished in a comparatively short space of time. This is what has given such an impetus to eugenics in recent years (1).

(1) As to the influence of an individual on the race and nation, we have a striking illustration of it in the life of one Elizabeth Tuttle from two English parents, who born in Massachusetts, developed into a woman of commanding presence and great beauty. She married Richard Edwards of Hartford, Conn., a lawyer of commanding presence, high repute and great erudition. They had one son, Timothy Edwards, and four daughters, after which in 1691, Mr. Edwards was divorced from his wife on the ground of her adultery and other immoralities. "The evil trait was in her blood for one of her sisters murdered her own son, and a brother murdered his own sister". Mr. Edwards afterward married Mary Talcott, an ordinary woman in appearance and ability and had five sons and one daughter, of whom never one of them rose above the station of their mother. Timothy Edwards distinguished himself at Harvard University, gaining in his four years' course two degrees, Bachelor of, and Master of, Arts, and became an eminent divine. He married and had one son, Jonathan Edwards, and ten daughters. Of the descendants of Jonathan Edwards, one of the world's greatest intellects, we have: Jonathan Edwards, Jr., President of Union College; Timothy Dwight, President of Yale University; Sereno Edwards Dwight, President of Hamilton College; Theodore Dwight Woolsey, President of Yale University 25 years; Sarah, wife of Tapping Rieve, founder of Litchfield Law School; Daniel Tyler, a general of the Civil War; Timothy Dwight, 2nd President of Yale University for 12 years; Theodore W. Dwight, founder and warden for 33 years of Columbia Law School; Henrietta Frances, wife of Eli Whitney; Merrill Edwards Gates, President of Amherst College; Catherine Maria Sedgwick Minot, the Author; and Winston Churchill, the Author. Of two of the descendants of Elizabeth Tuttle, thru her son, Timothy, Pierpont Edwards and Aaron Burr, there was inherited her good and evil traits. Of her four daughters, all had distinguished descendants, of whom might be mentioned Robert Trent Paine, who signed the Declaration of Independence; Fairbanks Brothers, Manufacturers of Scales at St. Johnsbury, Vt.; Morrison R. Waite, Chief Justice of the United States; and Ulysses S. Grant and Grover Cleveland, Presidents of the United States. There are many others, but enough have been named to show that the descendants of Elizabeth Tuttle constitute a glorious galaxy of America's educators, business men, and leaders of this great Republic.

In contrast to these remarkable results, a glance at the chart showing the ancestry of Don Carlos, the "madly depraved and cruel" scion of the Spanish throne, will show equally remarkably disastrous results from inbreeding those who carry in their germ plasma strains which portend mental degeneracy. Notwithstanding the long list of the mentally unbalanced and morally depraved from the pedigree of Don Carlos, there are mingled in this depravity such famous characters, as Charles the Bold of Burgundy, Maximilian I of the Holy Roman Empire, Ferdinand and Isabella the Catholics, and the Emperor Charles V. A study of these charts reveals an alternation of generations between insanity and genius and suggest that they follow the same law of inheritance. The deductions to be drawn from a study of these pedigrees is that if it is desired to accentuate the characters carried by the germ plasma, inbreeding should be practiced: if it is not desirable, inbreeding, or the marrying of near relatives, should not be practiced. Bearing upon this point the discovery of Greger Mendel, the Austro-Silician monk, gives a very definite notion as to the exact way in which divergent traits in any given pair of parents will be combined in their descendants. In brief, it is this: If tall vined garden peas are cross fertilized with short vined peas, the first generation will be all tall, tallness being the dominant quality or character, and shortness the recessive or latent character. If the tall hybrids are self-fertilized, as is normal with such peas, their offspring will be partly tall and partly short in the proportion of three tall to one short on an average. In the next generation the off-spring of the short-vined peas will be all short; the off-spring of one of the tall vined peas will be all tall, and the offspring of the other two tall-vined peas will be partly tall and partly short in the proportion of three to one. This formula will be repeated over and over; no matter how often the experiments are carried out, the results are always the same. This discovery of Mendel entitles him to a niche in the temple of fame side by side with that of Charles Darwin, who, if he could only have known of it and utilized it, his work would have been much more complete.

Anxious to know more about this law in a practical way, I visited the renowned Luther Burbank at Santa Rosa last year. I found he had demonstrated the general truth of this law thousands of times in the course of his independent experiments at a time when neither he nor any one else on this continent had even so much as heard of the name of Gregor Mendel, who, however, had completed and published his researches in an obscure journal in 1863, years before Mr. Burbank's time, but they were not really made known to the world until 1900, sixteen years after Mendel's death in 1884, during all of which

latter time Mr. Burbank had recognized and used the law to bring about the wonderful combinations he had made and the new species he had created in plants and flowers.

Altho Mr. Burbank is thought of as the wizard in the cultivation of plants, he, nevertheless, has just as definite ideas as to the cultivation of animals, and especially the child. His little book on "The Training of the Human Plant" should be in the hands of every parent, and Dr. Henry Smith Williams' book on "Luther Burbank, His Life and Work", in one volume, should be in the hands of those who desire to possess a practical knowledge of his work, while those who desire to go deeper should possess the encyclopædic work of thirteen volumes by the same author.

We are fortunate in having in this country the largest and most active organization in the world in aid of the Eugenic movement,—the American Genet Association—the annual dues for which include the Monthly Journal of Heredity, which gives an immense amount of practical information useful alike to every person interested in the welfare of the race. We also have Professor Davenport as director of the Department of Experimental Evolution of the Carnegie Institute of Washington, D. C., with the Station for Experimental Evolution at Cold Spring Harbor, Long Island, New York, gathering geneological records that have already supplied important data about the transmission of a large number of normal and diseased conditions.

The principles involved in the hereditary transmission of the color of the eyes, so often observed and commented upon, follow the Mendel law, which assists us to comprehend the vagaries of various bodily and mental characteristics of vast importance.

Dark eyes are dominant like the tall vined peas while blue eyes are recessive like the short vined peas, and their transmission follows the law of Mendel. Consumption appears to follow the same tendency as insanity and acts as a recessive trait, and the same is true of various other diseases which disappear in one generation and reappear in another, according to the same law. Thus atrophy of the optic nerve which leads to total blindness may run thru a family strain appearing in one generation and disappearing in the next. Parents who have no eye defect may transmit this tendency to their children and the blindness resulting therefrom may, with perfect propriety, be ascribed to heredity. This same law holds good in regard to many other defects of the eyes such as retinitis pigmentosa, albino eyes, and coloboma of the iris and choroid.

Among the most serious hereditary defects are those coming from the use of habit-forming drugs, and this is one of the reasons for the

world-wide movement to suppress the use of alcohol as a beverage. Formerly, this movement made less progress on account of members of the medical profession using alcohol in some form as a remedy in their daily practice. Now, that practice does not obtain, for nearly every physician condemns the use of alcohol. At a meeting of the Cumberland County Medical Society a few years ago, with a large attendance, members agreed to write down the names of remedies they would select if they could have but ten with which to practice medicine. After each had read off the remedies he would select, I remarked to Dr. Gordon that not one of them had selected alcohol as a remedy; and we both agreed that this result was very much different from what it would have been thirty years before that time.

The habitual use of alcoholic beverages is usually associated with that of tobacco, which, aside from its own evil effects, is a tremendous contributory factor in creating this habit. All those who have studied these two habit-forming drugs recognize this dependence, and assert that of the two, tobacco is doing more harm than alcohol, because, in the form of cigarettes, the habit is begun with boys at a very early age and has become alarmingly prevalent, stunting their growth and lowering their mental and bodily efficiency (1).

As inventions and mechanical appliances of all kinds become the common property of all nations, the difference in their progress and efficiency in every department of human activity must ultimately depend upon the average ability of the people who make up a nation. Therefore, if we as a nation wish to make the word preparedness, that we now hear so much about, mean anything worth while, we should do everything in our power to stop the terrible degenerative effects of tobacco upon our boys who will soon take our places. Physicians above all others can do much by precepts and examples to stop the fearful inroads of degeneracy that are gnawing at the vitals of our nation today. One of the greatest altruistic movements of the age is the issuance of the book entitled "How to Live" (2), authorized by and prepared in collaboration with the Hygiene Reference Board of the Life Extensions Institute, Inc., composed of many of the most eminent

(1) Charles B. Towns, in a book entitled "Habits That Handicap", has given to the world a remarkable exposition of this subject from his own personal observations. He outlines a practicable method of cure for these drug habits, the success of which is endorsed by such eminent authorities as Dr. Alexander Lambert, Professor of Clinical Medicine in Cornell University, and Dr. Richard C. Cabot, Professor of Medicine in Harvard University, who are constantly using it in their practice.

(2) How to live is a subject that concerns every human individual. We should know the truth about this vital question; therefore, I expect much benefit to be derived from the class, to study this subject, that I started during the session of our annual meeting. Anyone interested is invited to join this class. "How to Live" will be distributed to members of the class. "Habits That Handicap" has already been distributed to a large number. A series of questions will be asked on these two books, and their answers together with any comment that the members of the class may feel disposed to make, will be embodied in a paper to be presented at our next annual meeting.

men in America, of which Ex-President Taft is president. It is compiled by Professor Irving Fisher of Yale University and Dr. Fisk of New York. If every man, woman and child in this country would only read this book and study how to live, it would be a contribution to preparedness of all kinds. In fact, it would be preparedness itself, because it would mean mental and bodily efficiency to our people. Mental and bodily efficiency ensures the greatest earning ability of an individual, and hence the greatest economic value of man (1) upon which the wealth of the nation depends.

The hope of the future depends upon the training of the child of today, and as the physician enters so largely into this service he should realize his responsibility and so act that his contribution may be for its highest development.

In the dawn of history the physician was the treasurer of philosophy and morals. As his knowledge of diseases increased he confined himself more and more to the practice of medicine, until within the years alluded to in this address, he has made it one of the greatest of the sciences, teaching people how to live and so care for themselves that they may dwell with immunity in any part of the world. With this all-prevailing capacity of the physician for advancement and doing good among men in all the activities of life, it will be seen that in the furious struggle that is now going on among the civilized nations of the earth, he alone, among all men, has not forsaken his ideals, but has gone forth on the field of battle in the midst of the hail of bullets and fragments of shells to bind up the wounds of the injured, relieve their suffering, and carry them to safety no matter where they may be found or to whom they may belong. The philanthropy of the physician knows no bounds. It should, therefore, be the rallying spirit of our future hope for the international relationship which must exist among all people ere we shall have peace on earth and good will toward all men.

(1) The economic value of a man at 25 years of age, earning \$2.00 per day, or \$600. per year, is \$12,000, on a 3½% compound interest discount basis, and is found by assuming according to the life table that he would, on an average, continue to earn this amount for thirty-five years. This gives the term of compound interest discount of \$1.00 at 3½% at the end of every year for this series of years, which amounts to \$20., which multiplied by 600, the number of dollars earned in one year, amounts to \$12,000. It has been my aim in the various papers and addresses upon physical economics during the past twelve years, to introduce the natural science method of getting at the economic value of man and the measurement of damages to his body from injury or disease in a manner equitable to all concerned.

Necrology.

STEPHEN ELVARO WEBBER.

Calais, 1860-1916.

This genial, active and constructive member of our Association died after a long and cruel illness from Bright's Disease, on the 12th of January, 1916. He had noticed the first manifestations of his affliction in the previous March, but worked on amidst steadily increasing difficulties until October, when he gave up his practice for good, and then endured his intense sufferings bravely to the end. He was determined to work as long as he could, so that he "could make it easier for the



children," was his reply, when remonstrated with for working so hard after his disease was once established.

Dr. Webber was one of the family of nine children of Stephen and Betsey Durrell Webber, of Chesterville, Maine. He was born October 1, 1860; studied in the common schools, worked early and late for an education, pushed himself along to success in spite of great obstacles, and by dint of laboring, teaching, and saving, he obtained his degree at Colby in 1866. He then acted as principal of the High School in Calais, and married Miss Mary Lamb Rideout of that city. From her came the idea of her husband studying medicine, for which profession she saw that his mentality and sympathy naturally fitted him. From the time of her suggestion onward, carrying on teaching and medical studies side by side, he finally obtained his

medical degree at Harvard in 1894, at the age of 34—rather late in life, apparently, to begin the practice of the most impressive of the professions. Yet he gave himself at once and entirely to his chosen work, and had outside of it no interests except to provide for his children, so that they need not undergo his own hard experiences in youthful life.

Dr. Webber soon became a leader in medicine, clever in diagnosis, skilled in obstetrics in spite of a poorly developed sense of mechanics, and studious in surgery, caring for minor cases well, but lacking time to perfect himself in capital operations. He was, however, a steady man to have on the other side of the operating table, when younger men were striving for the rewards of brilliant surgery. He kept level with medical literature, and was always ready with advice in difficult cases. Physicians knew that when he had reached the end of his resources in a consultation he would tell the truth. As a member of this Association, he was an excellent speaker, lucid and convincing. Whether he prepared beforehand, or not, was hard to tell, but he had that valuable and rare gift of appearing to speak offhand with decisive effect in debate. As President of the Washington County Society, he was the leader during his term of office, and carried along the meetings with energetic steadiness and straightforward purpose. As a writer of medical essays, he stood in the front rank in Maine unfolding in them his valuable experience and putting his cases on record as part of his life in medicine. He had a gift of composition, clearness of exposition, and choice of language belonging to but few. He wrote, amongst other papers, a careful "Life of Dr. Vose, of Calais"; "Abdominal Symptoms in Thoracic Diseases"; "Phases of Obstetrical Practice"; "Home Treatment of Tuberculosis"; "Cæsarean Section," and "Diagnosis in Presentations." In the last years of his life, Dr. Webber paid considerable attention to diseases of the eyes, and soon obtained judicious success in that branch of surgery.

For the practice of medicine, he was naturally fitted, being calm, sympathetic, genuinely friendly and intimate with the fears and anxieties of his patients. He could also rejoice agreeably with them in their convalescence. He liked to talk with his patients, but did not care for conversation on ordinary topics of daily gossip. He never slighted a patient, gave of his best to all, and worked so steadily in medicine that he might have been called a day-laborer for all who wished to consult him. The interests of his patients were paramount to everything else in the world. He was kind to younger men, not only encouraging them with words, but giving to them patients, with dollars and cents behind them. He was, more than most physicians, a lonely man working with

one aim, to gain, by devotion to his patients the means of preventing his children from undergoing his personal privations in early life.

The face of Dr. Webber revealed an earnestness of purpose and a character of mind which no one could fail to appreciate. He was not only an enlightened practitioner in medicine, but additionally interested in civic affairs, including those of the public health and the care of the school children. I characterize him as a fine example of a man, working his way through early life in a profession which he did not really love, but at last finding the right thing to do, and doing it honestly and devotedly for the rest of his life. If, however, his earlier life had happened to be easier for him, we may believe that he never would ultimately, as he did, obtain the position of leadership in medicine in Eastern Maine.

J. A. S.

NOTICES.

WASHINGTON, D. C., August 7, 1916.

Dear Sir:—

The next examination for appointment in the Medical Corps of the Navy will be held on or about October 23, 1916, at Washington, D. C., Boston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago), Ill., Mare Island, Cal., and Puget Sound, Wash.

Applicants must be citizens of the United States and must submit satisfactory evidence of preliminary education and medical education.

The first stage of the examination is for appointment as assistant surgeon in the Medical Reserve Corps, and embraces the following subjects: (a) anatomy, (b) physiology, (c) materia medica and therapeutics, (d) general medicine, (e) general surgery, (f) obstetrics.

The successful candidate then attends the course of instruction at the Naval Medical School. During this course he receives a salary of \$2,000 per annum, with allowances for quarters, heat, and light, and at the end of the course, if he successfully passes an examination in the subjects taught in the school, he is commissioned an assistant surgeon in the Navy to fill a vacancy.

Full information with regard to the physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the Surgeon General of the Navy, Navy Department, Washington, D. C.

Very truly yours,

W. C. BRAISTED,

Surgeon General, U. S. Navy.

BULLETIN NO. 8

Why Should Advertisers Use Space In This Journal?

FIRST:—It is the official Medical Journal in this State. It is published by the Maine Medical Association.

SECOND:—It covers its field, and confines its circulation to it. No other journal does.

THIRD:—It has more circulation in its territory than any other medical journal. This makes it the logical advertising medium for its own field.

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FIFTH:—This Journal is not published for the profit of any individual, but is published solely in the interest of all the members of the State Medical Society. This gives a superior value to our advertising pages.

SIXTH:—All the readers are physicians. They are members of their own County Medical Society. This indicates their professional standing and influence in their own communities.

SEVENTH:—Equable circulation among all the members of all the County Medical Societies throughout the State, guarantee advertisers their goods will be called for in cities, small towns, and even rural districts, thus creating a demand for their goods from druggists and merchants whom traveling salesmen have not visited.

EIGHTH:—The members of the Maine Medical Association are the owners of this Journal, and naturally take an active interest in the advertisements, and patronize the firms that patronize them.

NINTH:—We accept none but approved advertisements. Our moral guarantee goes with every advertisement we print. Our readers know these facts, have confidence in the advertisements and buy from our advertisers.

TENTH:—The ethical character both of our readers and our advertisers is an assurance that deserving producers are thus brought into intimate touch with discriminating buyers.

ELEVENTH:—This Journal gives advertisers a sworn statement of its average circulation, covering a period of six months, not for one special issue only. Our rates are reasonable, based on circulation, quality of the medium, and the fact that it is a special publication for a special field.

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FOR FURTHER INFORMATION WRITE THE PUBLISHER, OR OUR ADVERTISING REPRESENTATIVES, THE COOPERATIVE MEDICAL ADVERTISING BUREAU, 535 N. DEARBORN ST., CHICAGO.

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Editorial Comment.

Third New England Tuberculosis Conference.

We are requested to inform the physicians of Maine that the Third New England Tuberculosis Conference will meet in New Haven, Connecticut, on October 12th and 13th. A full discussion of the experiences of individual physicians and medical associations will follow one or two formal papers by tuberculosis experts. There will also be discussion on the social aspects of tuberculosis and informal talks on the important topic from every possible point of view. It is to be hoped that some of our members will take especial pains to be present, and to relate their experiences later on either before the County or the State Societies of Maine. Constant discussion of this wide-spread disease seems to be the best way to obviate; and to relieve the community of: its deadly presence.

A Clearing House for Medical Papers in Maine.

Wherever you go in medical Maine, you will hear of differences of opinion between the members of the County Medical Societies concerning the advisability of presenting local or foreign talent on the programs of the meetings. Some members advocate local papers every time, on the ground for one reason that they do not want outsiders coming in the State and telling in a confident way that they know more than the local men, when it is a fact that our home talent is as skilful as any out of the State. Others insist that local talent is scarce, that we all know what every local man is going to say, that local papers contain little that is original, that they, personally, have more than they

can do to compose a paper more than once in a year or two for the local societies, that the call for papers from local men is greater than the supply, and so on in long continued arguments.

Much can be said on both sides of the question, but some plan lying between all of these controverted ideas seems up to this time to have been hardly touched upon in medical circles. This is the benefit of a clearing house for local medical papers between the County Secretaries. Under such a plan each County Secretary could keep a list of local papers read before each county at every stated meeting, and forward it with comments to the other Secretaries, so that whenever a program committee met for deciding upon a program for an ensuing meeting, they could have the advantage of understanding what topics have been discussed in other counties and what papers of value had been read and seemed to attract the most earnest discussion. By some such plan, local talent could be unearthed and encouraged. The writers of the best papers in any county could be invited to read their paper again before another county society meeting. By such a plan, additionally, comparison with foreign talent would become clarified.

We do not believe either in the exclusive invitations to writers outside of Maine, or in the exclusive invitations of papers from physicians living in the State. We do know, however, that many from away are more likely to instruct us concerning different types of disease than those seen at home, and of different treatment utilized amongst us, personally. We understand that those about us will naturally echo what they see and hear around them, or will quote largely from those afar. Foreign talent has, additionally, the advantage in many instances of broader experience in hospitals and laboratories than is enjoyed by most of our local writers of papers.

The question of a Clearing House is very broad, much might be said about it, and it is with a hopeful view of obtaining interchange of opinion that we now set it forward, diffidently, into the light of publication in the columns of the JOURNAL. In some way or other it is bound to be of great value to County Officers, in assisting them in the very difficult task of composing satisfactory programs for at least four meetings every year.

J. A. S.

The National Board of Medical Examiners of the United States.

"The need of a standard medical examining body for the whole United States and its Territories (tributary thereto) has occasioned the organization of The National Board of Medical Examiners. It is a

voluntary board, the members of which are selected from the Medical Corps of the Army, the Navy, and the Public Health Service, the Federation of State Examining Boards, and other representative organizations, and the medical profession of the United States.

The aim of this Board is to establish a standard of examination and certification of graduates in medicine, through which by the co-operation of the individual Boards of Medical Examiners, the recipients of the certificates of the National Board of Medical Examiners may be recognized for licensure to practice medicine.

The policy of the Board is to conduct its examinations on a broad scientific basis of such a high yet practicable standard that the holders of its certificates will receive universal recognition.

The independent action by the Board is furthered by the financial and moral support of the Carnegie Foundation.

The permanent organization of the Board will consist of the three Surgeon Generals and one other representative from each of the Government Medical Services, three representatives of the Federation of State Medical Examining Boards, and six members chosen at large from the medical profession by the National Board of Medical Examiners.

The official domicile of the Board is Washington, District of Columbia.

EXAMINATIONS.

The Board has been given spacious rooms in the Army Medical Museum for conducting its examinations. They will be conducted primarily by members of the Board, and will be written oral, and practical, including the examination of cases. In addition to the written examinations held in the Army Medical Museum, oral, written, and laboratory examinations will be held also in the Army and Navy Medical Schools, and in the Hygienic Laboratory of the Public Health Services, these facilities, as well as the Government Hospitals wherein will be held clinical examinations, having been placed at the disposal of the Board for the purpose.

Credentials must be presented to the Board sufficiently early for investigation. If adequate time is not allowed for this purpose, credentials may be rejected.

Passing grade is an average of 75 per cent.

A candidate receiving a mark below 50 per cent. in one subject or below 65 per cent. in two subjects, fails.

Candidates failing at the first examination may register for a second examination at the end of one year. A third examination will not be allowed.

It is expected that the examination will cover about one week.

No fee is charged for the examination itself, but a registration fee of Five Dollars will be required.

The first examination will be held in Washington, beginning October 16, 1916.

CERTIFICATION.

Candidates who have been successful in passing the examination and are approved by the Board, will be granted certificates.

This certificate is not a license to practice medicine, nor does it exempt the holders thereof from complying with the legal requirements of the States in which they desire to practice; but it will be evidence of high attainment in medical knowledge; and will, the Board believes, soon be accepted by State Boards as evidence of qualification for licensure."

In view of the present chaotic state of our Medical Registration laws, the profession of this Country should welcome this effort to standardize medical licensure. Our various State laws are the result of legislative enactment and cannot be freed from political mistakes or compromises. The public mind is now confused in the multiplicity of Boards already in existence or soon to be.

Such a board as this will place the standards of medical licensure on a far higher plane. Moreover, if a certificate from this board will be acceptable to all state examining boards, it will eliminate the necessity of Reciprocity.

Further information and application blanks may be obtained from the Secretary.

DR. J. S. RODMAN,

2106 Walnut St., Philadelphia, Pa.

DEATH OF SIR VICTOR HORSLEY.

The death of this famous brain surgeon from heat exposure with the British troops in Mesopotamia, is very lately announced. Sir Victor was a very distinguished surgeon as every student of medicine knows, and he was moreover famous for his epoch-making studies of myxoedema, and his laboratory investigations of the localization of brain tumors. He was highly thought of for his extreme courtesy to his colleagues in surgery, and laboratory studies. He gave much time to social questions, abhorred alcohol in every shape, worked in every direction to restrict its manufacture, sale and use in medicine in any way, internally. He was interested largely in the medical inspection and examination of school children, and in their treatment in times of epidemics. He was equally at home on the taxation of land values, and as a champion of woman suffrage. Strong in personality and unyielding in his convictions, he was very often in wordy conflict with opponents in medicine and politics, who however, in spite of his vehemence in words, gave him due respect, and proper honor, for his manliness, in all that he championed as right.

Sir Victor was 59 years of age at the time of his death, and had long been a member of many medical societies at home and abroad; membership won chiefly for his immortal labors in the surgery of tumors of the brain.

J. A. S.

Abstracts from Current Literature.

Observations on the Use of the Duodinal Tube for Diagnosis and Treatment.

By Dr. Franklin W. White, Boston.

"My own use of the tube was begun about two years ago in a rather skeptical spirit, fearing that the instrument was little more than a toy, and that its use might be disagreeable to the patient and the results of doubtful value. I was encouraged, however, by finding that men of good judgment in different parts of the country were beginning to use it, and my own experience has convinced me of its value, both for diagnosis and treatment. It is a real contribution to medicine and deserves far greater use than is being made of it now."

"The introduction of the duodinal tube into the adult stomach is a mild procedure."

With the aid of the fluroscope and by employing different postures of the patient, Dr. White feels that he has determined the quickest and most practical means of introducing the tube. By his method, which is described in detail, the tube reaches the duodenum in about 30% of cases within fifteen minutes, in about 30% more within 30 minutes, and in about 20% more in from one to six hours. In about 20% of patients the tube had to be left over night." Haste in introduction is necessary for diagnostic purposes only; for treatment, the tube may as well be left over night.

"Pyloric obstruction may prevent passage of tube. In such cases the tube is not to be used for therapeutic purposes. The chief use of the tube for therapeutic purposes is in cases of gastric and duodinal ulcer, uncomplicated by pyloric stenosis.

In the following issue of the Journal, on May 11th, Dr. White considers the use of the tube for diagnostic purposes in diseases of the duodenum, the pancreas, the liver and the stomach, and shows by a series of forty-nine cases that much valuable information may be obtained by its use. To those interested in the subject, the whole article will prove both interesting and instructive.

R. F. CHASE.

County News and Notes.

YORK.

YORK COUNTY MEDICAL SOCIETY.

The eighty-fifth quarterly meeting of the York County Medical Society was held at Sparhawk Hall, Ogunquit, Me., June 29th. Dr. H. L. Prescott, Kennebunkport, presided. Dr. Ralph W. E. Cole, York Village, was elected to membership. Delegates to the Maine Medical Association made reports. Dr. E. E. Holt, of Portland, Ex-president of the Maine Medical Association, and Dr. W. F. Hart, of Camden, President of the Maine Medical Association, were among our guests, and each spoke in a delightful manner.

Dr. W. Grant Hague, of New York City, presented a paper on "The Treatment of Tuberculosis Among Wage Earners," as conducted at the Thompson Street Rooms in New York. There are ambulatory cases, and treatment is based on the assumption that lime starvation is the principal cause of the disease. Hydrochloric acid, milk, and fat emulsions are given freely, and the result has been 63% apparent cures in those treated in this manner, according to Dr. Hague's record. This paper made a favorable impression, and created some discussion.

The weather being fair, the dinner excellent, the location inviting, the program attractive, and the occasion, our annual "Ladies' Day," it could not be otherwise than a most satisfactory event to all who attended.

Adjournment was at 4.00 o'clock.

There were present:

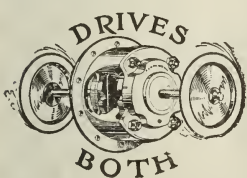
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Dr. W. G. Hague, N. Y. City	Dr. and Mrs. R. S. Gove
Dr. W. W. Varrell, York Harbor	Dr. and Mrs. D. W. Wentworth, Sanford
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Dr. and Mrs. E. E. Holt, Portland	Dr. and Mrs. H. I. Durgin, So. Eliot
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Dr. and Mrs. J. W. Gordon, Ogunquit	Mrs. Helen M. Dolley
Dr. and Mrs. G. E. Cook, So. Berwick	Dr. A. H. Jones, Old Orchard

ARTHUR H. JONES, *Secretary*.

FOCAL INFECTION IN SKIN DISEASES.

M. L. RAVITCH, Louisville, Ky. (*Journal A. M. A.*, Aug. 5, 1916), reports a series of cases illustrating the relations of focal infection to certain dermatoses. He says that it is an unfortunate fact that dermatologists have too much neglected the search for the true etiologic factors of skin disease and given more attention to nomenclature and classification. There has been a change recently in this regard, and credit is due to Billings and Rosenow, whose theory of focal infection

has opened our eyes to the explanation of certain dermatoses of obscure etiology only a few years ago. With the key we now have we can trace relationships and diagnose intelligently. The cases he reports illustrate his statements, and they are only a few selected ones out of many. Not all systemic and skin derangements are due to focal infection. Many obscure diseases may be traced to faulty internal secretions, but these again on their part may be due to focal infection. It all teaches us to be on our guard and thoroughly examine doubtful cases, and above all, he says, let us treat the skin not as a surface only, but as a cutaneous organ, as capable of infection from within as any other organ.



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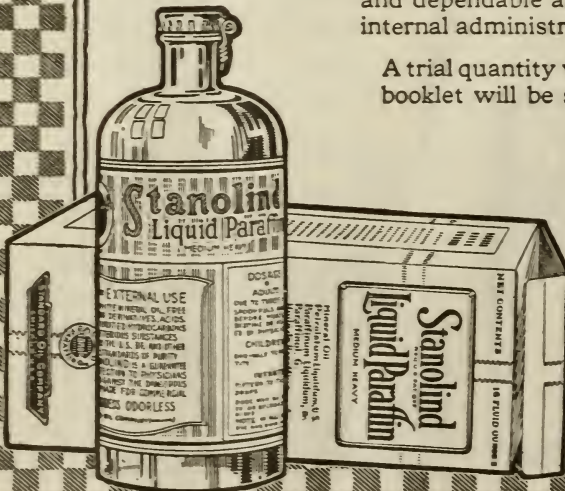
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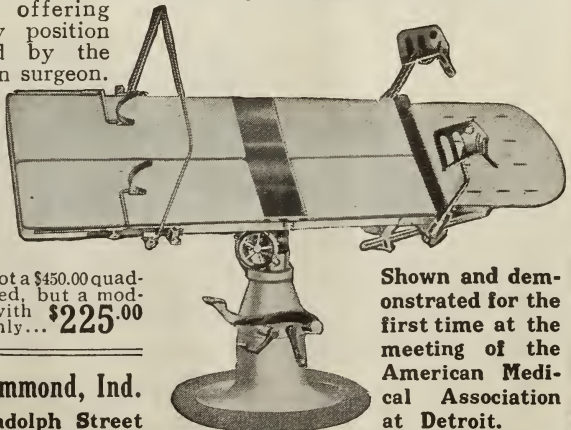
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THE JOURNAL



Maine Medical Association.

The Official Organ of the State and County Medical Societies.

VOL. VII, No. 2 SEPTEMBER, 1916. \$2.00 per year



TABLE OF CONTENTS

<i>Original Articles—</i>		<i>Miscellaneous—</i>	
Oxygen and Cancer	41	Correspondence	63
The Climate of Maine	52	Notices	66
New and Non-Official Remedies	59	Abstract from Current Literature	68
Hay Fever and Its Complexities	61		
Bulletin No. 9	62		

MAINE MEDICAL ASSOCIATION.

The Next Meeting will be held at Portland, June, 1917.

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*OXYGEN AND CANCER.

By CHAUNCEY R. BURR, M. D.

Mr. President and Members of the Portland Medical Club:

My address tonight will be upon one of the latest and least known of the theories relating to the causation of cancer. That is, I infer that it is but little known, for although I first heard of it in May, 1914, i. e., seventeen months ago, I have not as yet seen a single allusion to it in current medical literature. This is probably due to ignorance of the author, one Lionel Cresswell, and of his work, by the medical profession, for he apparently is not a physician, as he describes himself as a "private student of biological biochemical, and vital phenomena," and also to the medium through which he announces his conclusions to the world upon the etiology of cancer, viz., "The Nineteenth Century and After," for May, 1914. Still, the theory is worth a hearing upon its merits, even if propounded by a layman, and as I think it really does throw some light upon a very dark subject, I have ventured to bring it before you this evening.

It has been well said that "Cancer is the casket of its own secret". In seeking a key to open this casket, all sorts of theories have been tried. Perhaps the one most frequently and persistently used is the theory that cancer is the result of infection by an animal or vegetable parasite. It is a popular theory, it is easily understood, and it has certainly been widely advertised. And yet, in 1912, the *Medical Annual* for that year could say:

"The parasitic (extrinsic parasitic) theory of the origin of cancer is perishing for want of evidence. On the other hand, the intrinsic

* Read before the Portland Medical Club, December 2, 1915, as the Annual Oration.

parasitic theory which regards the cancer cell itself as a parasite arising *de novo* from the normal cells of the body is at present dominant."

Again, in 1914, the same publication said:

"There was an interesting discussion on the pathology of cancer at the International Congress of Medicine. Bashford spoke on the subject from the point of view of its experimental study. Generally, he looked upon cancer as an indirect result of chronic irritation, but no pronouncement could be made as to the direct or actual cause. He did not incline to the view that any 'cancer parasite' was responsible, as, in addition to the fact that the disease differed in many respects from the known infective diseases, it was difficult to conceive of a parasite capable of determining at one time cancerous proliferation in epithelial and gland cells, and at another in connective tissue. The only common property of malignant tumors was the cell itself, and he was inclined to believe that the cause which led to the proliferation and unbounded growth was some subtle chemical or biological agent."

Dr. Bashford's opinion is of great value, for since 1902 he has been General Superintendent of Research, and since 1903 Director of the Laboratories of the Imperial Cancer Research Fund of London.

Very much in the same vein is the evidence of Leo Loeb, M. D., of the Barnard Free Skin and Cancer Hospital, St. Louis, Mo., who, at the close of an article in the *Popular Science Monthly* for January, 1914, entitled "The Present State of Cancer Research", says:

"However, in no case of human cancer has the causative significance of a micro-organism so far been proven. We shall see later on that in a certain kind of animal cancer this proof has recently been supplied by Peyton Rous."

Peyton Rous, according to the account given by Gaylord, of the New York State Institute for the Study of Malignant Disease, has demonstrated that filterable viruses can be made from chicken sarcoma, which, when injected into healthy chickens, will produce sarcoma of the same type. Thus he can produce at will a spindle-celled sarcoma, a clefted sarcoma with sinuses, or an osteochondro sarcoma, thereby showing a degree of specificity which is remarkable. In fact, as Gaylord says:

"We are face to face with the probability that if the various types of cancer are to any great degree caused by such viruses, there are many of them, and probably each has marked specificity for one type of tissue."

Gaylord can see in this discovery of Rous nothing but confirmation of the theory, to which he is evidently committed, that cancer is a parasitic disease.

Other observers, however, draw different conclusions. Some say that Rous' filterable agents are not viruses at all, but biochemical products of the nature of ferments or activators (i e., hormones).

I shall return to this interesting subject later. But for the present I would direct your attention to the consideration of the relation of chimney sweeps to cancer.

In the tenth edition of the *Encyclopædia Britannica*, Vol. XXVI, p. 557, certain figures are given relative to the frequency of cancer mortality in different occupations. As this list is important for the understanding of the Cresswell theory, I will give it. The numbers mentioned are for the purpose of grading the frequency with which cancer occurs in different occupations. I suppose them to refer to the number of deaths per thousand.

Grocers,	34	Plumbers,	53
Clergy,	35	Inn Keepers,	53
Potters,	35	Coal Heavers,	56
Coal Miners,	36	Butchers,	57
Farmers,	36	Coachmen and Grooms,	58
Fishmongers,	42	Tool and Scissors Makers,	58
Medical Practitioners,	43	Gas Workers,	59
Blacksmiths,	45	Lawyers,	60
Fishermen,	46	Merchant Seamen,	60
Porters,	48	Maltsters,	61
General Laborers,	48	Commercial Travellers,	63
Drapers,	49	Inn and Hotel Servants,	65
Shoemakers,	50	Brewers,	70
Dock and Wharf Laborers,	51	Inn Keepers in London,	70
Tobacconists,	51	Chimney-sweeps,	156

In commenting on these figures, the writer says: "It looks very much as if chance had more to do with the matter than anything else (i. e., the incidence of cancer), but there is the one striking fact of the enormous susceptibility of chimney sweeps, which is too great to be explained by chance. The well-known and long-recognized frequency of cancer in this particular class used to be advanced as proof of the hypothesis of local irritation, which is still the orthodox explanation of cancer. The soot is supposed to act as an irritant; but if so, why are porters and coal miners, who also work in irritating materials, so very low in the cancer scale? No doubt the case of the chimney sweep contains one of the keys to the problem of cancer causation, but it has not been found yet."

With these prefatory remarks, I will now let Mr. Cresswell present his theory in his own words. He says:

"In the midst of all the welter of literature and statistics, records of experiments, theories of causation, and natural history of the subject, the one striking fact of the enormous susceptibility of chimney sweeps, which is too great to be explained by chance . . . arrested and focused my attention. From general knowledge of the nature and properties of amorphous carbon, of which soot is a form, the question was aroused in my mind whether the influence of oxygen as a factor in the causation of the disease had been fully considered from all points of view. . . .

"In the course of my study of the nature and incidence of the disease, the absence of oxygen from the blood and tissues and cells of cancerous persons on the one hand, and on the other hand the presence of oxygen in association with soot and other known and probable cancer irritants, pressed itself on my attention. Oxygen becomes associated with soot . . . by the well-known property all forms of amorphous carbon . . . possess of surface condensation and absorption of oxygen from the air. The simple household phenomenon of a chimney catching fire is due to the condensation and absorption of oxygen by the soot.

"The soot, inert by itself, acts as a catalytic agent. In chemistry, a catalytic agent is a body which produces chemical changes in another, apparently by mere contact, and without itself undergoing permanent changes. Ferments, enzymes and oxidases all act catalytically, and as Berzelius said long ago (*Lehrbuch der chemie*, 1837), 'We have reasons, well founded on fact, to make the assertion that in living plants and animals there take place thousands of catalytic processes between tissues and fluids'.

"The natural means whereby living organisms have their normal requirements of oxygen supplied are necessarily limited and inelastic. . . . Even the increased blood-pressure that is so frequently observable in cancer cases does not completely rectify or set off any breakdown. The increase of the pulse rate in malignant conditions shows that the tissues are demanding more oxygenated blood. Or the oxygen hunger may be local, as in the case of functional old age, e. g., the physiological death of the special organs of generation in women.

"Now living matter has a great affinity for oxygen and possibly can take it direct and greedily from the air, as some say, but at any rate can do so when there is a third substance present and can actually separate it from various chemical compounds, such as oxyhæmoglobin, and alizarin blue . . .

"If at one spot in the protoplasm of a cell oxygen is lacking, the molecular equilibrium will be disturbed. To restore equilibrium, there

must be a re-introduction of oxygen, and the attraction of it from a quarter where it occurs in a fluid or mobile condition will be the more energetic. . . .

"Oxygen occurs in a fluid or mobile condition absorbed in the soot in the case of chimney sweeps' cancer. It is not unreasonable to regard this absorption passage and exchange of oxygen, in view of its relation to cell life, as a highly irritating stimulus, and conceivable to suppose that it sets up phenomena of increased cell activity and increased cell nutrition in direct ratio with the quantitative and qualitative nature of the supply. . . .

"The cell fortunate enough to secure the fullest supply of oxygen . . . assumes malignant characteristics. . . . It may even become a cannibal. . . . For there are indications that actively growing carcinoma cells feed upon the pre-existing tissue, and apparently by phagocytosis, by extra cellular ferments and by preparatory solution, the tumor cells replace the tissue cells and use them as food stuffs. . . ."

In short, "A cancer cell is simply a normal cell that, under the existing stimulus of nascent and highly active and possibly atomic oxygen, has burst its bonds, has rebelled successfully against its restraints, and has re-attained the immortality it has been hitherto denied and deprived of for the sake of special reproductive or sex cells."

Having stated this theory, the author next marshals an array of facts to support it. It would take too much time to give these in detail, so I will only mention a few of the most important.

He accepts the dictum of Sir Jonathan Hutchinson that sarcoma and carcinoma are one and the same thing in different tissues, and believes, with others, that in almost every case of sarcoma there is a history of injury, with a destruction of red blood corpuscles, and that it is remarkable that sarcoma occurs most frequently in those tissues which are rich in hæmoglobin, as the choroid coat of the eye (melanotic sarcoma), the bone marrow, and the neighborhood of muscles. The fact that melanin is often found in sarcoma cells suggests "that it plays the part, directly or indirectly, through the process of its formation, and internally and intercellularly and intracellularly of a peroxidase or oxygen-attracting and passing catalyte, a part similar to that played by soot extracellularly and externally in the onset of chimney sweeps' cancer."

"In extensive hæmorrhage, the hæmoglobin of the blood may be disintegrated into hæmotoidin, a pigment which does not contain iron, or into hæmosiderin or hæmofuscin, pigments which do contain iron. In the normal process of hæmolysis, hæmosiderin is stored up in the cells of certain organs, notably the liver, until required by the organism

for the formation of fresh hæmoglobin. Its retention by the liver may explain the rapid progress of cancerous secondary deposits when they reach that organ." In short, the hæmosiderin probably performs the part of a catalytic agent in providing for a steady flow of oxygen to the cancer cell.

In the same way, cholesterin gall-stones, which are found in 95 per cent. of cancerous gall-bladders, according to Sir John Bland-Sutton, may act as an oxygen-passing catalyte similar to soot, hæmosiderin and melanin.

Sarcoma, then, seems to be due firstly, to "an injury resulting in local senility and oxygen hunger, and secondly, to a great destruction of red blood corpuscles with a breaking up of hæmoglobin into globin (which may take a hand in the causation as a ferment), and hæmosiderin or melanin which finds an intercellular or intracellular lodgment in the tissues, and there attracts oxygen and passes it on atomically excited to some of the other surviving tissue cells", thereby stimulating them to riotous growth.

This explains why sarcoma may occur in the young and vigorous, in whom there is no failure in the oxygen-carrying system.

Carcinoma, on the other hand, is a disease of advanced age, of sclerotic arteries, of sub-oxidation and increased alkalinity of the blood.

"If additional proof of the malignant activation of the normal cells by oxygen be deemed necessary, I conceive it may be found in the consideration of . . . that remarkable organ in the pregnant woman called the placenta. . . . Pathologists have often remarked on the similarity between the early stages of placenta formation, when the maternal tissues are interpenetrated by the chorionic villi, and the cancerous process."

"Veit and others have shown that portions of the chorionic villi are shed just like the 'wander cells' of cancer. In the majority of normal pregnancies such emigrants are usually soon dissolved by the maternal blood and tissues and disappear. In cases where they survive and grow into secondary tumors . . . it is supposed that abnormal changes in the ovary and changes in the blood induced thereby . . . permit them to acquire powers of abnormal growth."

"The disease known as chorion epithelioma is a form of malignant disease due to malignant change taking place in the epithelium of the villi when these, instead of forming a healthy functional placenta, undergo hydatidiform degeneration : . . ."

"Now fertilization, including nuclear and cell division, as we have learned from the patient and elaborate researches of Jacques Loeb and others, is a phenomenon of oxidation. . . . We have in the chorionic villi, cells stimulated by fertilization of the ovum, endowed with so

great a hunger . . . for oxygen as to be capable of extracting it from the mother's blood and yet of surrendering it on demand to the still more imperative oxygen hunger . . . of the growing embryo. In normal pregnancies this superior oxygen want of the embryo inhibits any malignant proliferation of the chorionic villi or emigrant cells. But where, from interference with the normal course of pregnancy, this inhibition is deranged, the trophoblastic tissue diverts the oxygen supply to its own vegetative and malignant advantage", and chorion epithelioma results.

To summarize the progressive order of the causation of cancer as already expressed,

First of all comes oxygen,—not the ordinary oxygen of the atmosphere diluted with four times its volume of nitrogen, but more probably oxygen surface condensed and molecularly disturbed and keen to enter into chemical combination.

Secondly, there must be a catalytic agent present, soot in the case of chimney sweeps' cancer, blood decomposition derivatives, such as hæmosiderin or globin in sarcoma, melanin in melanotic sarcoma, and ferments, enzymes or oxidases in other cases. The current view regarding ferments, enzymes and oxidases is that they are catalysing agents with oxygen as a resultant in passage.

The *third* factor is the exposure of the cell protoplasm to the chemically excited oxygen, by either local injury or chronic irritation of a mechanical kind, i. e., the cell must be pierced or broken open.

The *fourth* factor is oxygen hunger in some of the cells, or in all, arising from

The *fifth* factor, which is senile decay. This may be local or general. Arterio-sclerosis is often an accompaniment of this period of life and undoubtedly helps to limit the supply of oxygen to the body at large.

The *sixth* factor is an increased alkalinity of the blood. This favors oxidation. "Prof. Benjamin Moore, in a communication to the Royal Society in 1905, states that in cancer generally, and not merely in cancer of the stomach, the secretion of hydrochloric acid by the glands of the stomach is greatly diminished or abolished, and that the blood is usually of excessive alkalinity in cancer. . . . Gibson notes that hyper-alkalinity of the blood serum is a characteristic feature in cases of malignancy, . . . while Moore and Wilson . . . draw attention to the fact that there is an increase in alkalinity of the serum in old age when the organism is more liable to the onset of cancer."

This closes the evidence which will be adduced in support of the Cresswell theory of the causation of cancer. As I said in the begin-

ning, I think it does throw some light upon a very dark subject, and is well worth consideration. And the author has my admiration for the masterly and interesting way in which he has marshalled his facts.

But I do not think that nascent oxygen is the cause of cancer, however much it may have to do with its development. There is something behind and beyond this which it is necessary for a cell to have before it can absorb oxygen, or even be irritated by it, and that is sensitiveness. If a cell cannot or does not breathe, even oxygen will fail to excite it. Now this is apparently the state of affairs in old age and malignant disease. Proof of it is found in the sixth factor of Cresswell's summary, to wit, that in cancer there is an increased alkalinity of the blood, and in Moore's observation that in cancer there is a diminished secretion of hydrochloric acid by the glands of the stomach. The two facts are correlated. Many attempts have been made to explain the *modus operandi* of the secretion of hydrochloric acid by the glands of the stomach. The hypothesis of Maly is the one most in favor at the present time.

According to this, the normally weak alkaline reaction of blood is due to the presence therein of two salts, viz., bicarbonate of sodium and disodium phosphate. If carbonic acid is present in the blood in excess, as it should be, it acts upon the disodium phosphate to form monosodium phosphate. If sodium chloride is present it acts upon the monosodium phosphate to form disodium phosphate and hydrochloric acid. The latter diffuses through the acid glands into the stomach cavity.

Now in cancer and old age it would appear that the break in the chain is due to the diminished quantity of carbonic acid in the blood, for without an excess of this no monosodium phosphate will be formed, and if this is absent no hydrochloric acid can be formed. The blood therefore becomes excessively alkaline from the absence of both carbonic acid and hydrochloric acid, and the presence therein of bicarbonate of sodium and disodium phosphate. The evidence is pretty strong, therefore, that the diminished quantity of carbonic acid in the blood, in these states, is due to failure of cellular respiration. For if a cell does not absorb oxygen it will not give out carbonic acid.

Why should there be failure of cellular respiration in cancer and old age? For the probable reason that certain of the ductless glands are worn out or out of order.

Sub-oxidation is one of the results of thyroid insufficiency. If thyroid gland is given therapeutically in such a case, the consumption of oxygen may be increased 70 per cent. Even in normal individuals the absorption of oxygen and the excretion of carbonic acid may be increased from 10 to 20 per cent.

Now thyroid insufficiency is a concomitant of old age and probably of carcinoma as well. Owing to the deficient secretion of thyroid juice, there is diminished oxygen absorption and carbon dioxide secretion. The temperature is subnormal, nitrogen metabolism is lowered; the daily excretion of urea is often less than 20 grams. Under these conditions I fail to see how oxygen locally applied by means of a catalyte is going to start a reaction. The cells, generally, in such an individual will not respond to oxygen. Why should they locally so respond? No. The cell must first be sensitized to oxygen before it will absorb it.

In the case of cancer, the sensitizing agent must act in a very localized manner, upon probably one cell. In a body such as I have described, suffering from thyroid insufficiency, and in a state of sub-oxidation, one cell is suddenly quickened into life. It is given the power of again breathing oxygen and of growing, which has gradually been lost by the other cells. Does not this phenomenon strikingly suggest impregnation? Wherein does it differ from the growth of a fertilized ovum, except that in the latter there is an orderly development which stops when the fœtus is fully formed; while in the former there is a disorderly development which stops only when it has killed the host?

It would appear, therefore, that a cancer cell is a normal somatic cell fertilized by some as yet unrecognized agent. If this should prove to be so, then the Cresswell theory follows in due order.

The discovery of hormones and their function in the body has opened up a new field of research. The act of fertilization must be due to a hormone contained in the male gamete or spermatozoon. The female gamete or ovum is an epithelial cell. It is a fair question to ask whether other epithelial cells, as those in the *cervix uteri*, can be fertilized by a spermatozoon? If so, it would explain the incidence of epithelioma of the cervix in married women. But there are plenty of cases which cannot be so explained. Moreover, carcinoma is a disease of advanced life when the gonads, or sex glands, have ceased to functionate. We have also seen that the thyroid is in the same state.

Now old age is a progressive thing. The body does not give out all at once, like the one-horse shay, but its powers are slowly curtailed. For example, the eyes should be the first organs to show the signs of senile decay, while the heart and kidneys should be the last.

There is a close connection between the functional activity of the gonads and the thyroid gland. The latter is an erectile organ and can often be seen to be in a condition of turgescence during menstruation, pregnancy and the menopause. I am not concerned here with the

symptoms of hyperthyroidism, but rather with its antithesis, hypothyroidism, the condition found in old age and carcinoma. The decline in the functions of the thyroid and the gonads seems to be contemporaneous. At the same time the hypophysis enlarges and a condition of hyperactivity of the gland results. It would appear as if the stimulation of the gonad and thyroid hormones was replaced by that of the pituitary gland. The effect, however, is different. Hyperpituitarism is characterized by an increased growth of connective tissue, cartilage and bone. Glycosuria is common. When the sclerosis is in the arteries there is, of course, an increase in the blood-pressure, and we have the condition known as arterio-sclerosis. The calcification of such arteries is a well-known phenomenon. It is supposed that thyroid juice is one of the chief factors in the excretion of calcium, i. e., that it renders calcium soluble in the body fluids. If this is so, calcification of the arteries is the result of the drying up of the thyroid secretion. I may add in this connection that I have recently seen calcification of the external carotid artery removed by thyroid medication.

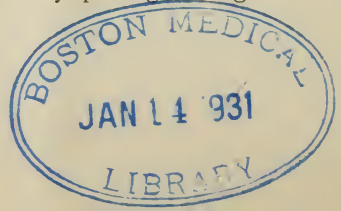
The hypophysis is not the only ductless gland which has an influence upon body growth. We know that the thyroid, thymus and pineal glands all influence growth through their glandular secretions. But from the data at hand it would appear that the hypophysis is the principal source of ductless gland activity in advanced life. For instance, symptoms of acromegaly, which is known to be due to hyperpituitarism in the early stages at least, often develop after the menopause in women and the decline of the sexual powers in men. Who has not seen the big ears and noses, the growing head and hands and feet of this time of life?

A young cell is more sensitive to hormonal influences than an old one and it may well be the case that much of the extraordinary growth of a carcinoma, particularly its connective tissue elements, is due to the pituitary hormone.

I have not dwelt upon the difference in function between the anterior and posterior lobes of the hypophysis, because it seemed immaterial to do so. It is the whole gland which is enlarged in hyperpituitarism, not a part thereof. It is known, however, that the anterior lobe contains iodine in organic combination like the thyroid, and that if fed to young animals it seems to stimulate growth, and that the posterior lobe contains a principle which causes contraction of unstriated muscular fibre.

Let us now return for a moment to Peyton Rous's filterable viruses of chicken sarcoma.

And first, what is a filterable virus? According to the 1911 edition of Lippincott's Medical Dictionary, it is "any pathogenic agent



which will pass through a porcelain filter". Therefore, it does not even have to be a germ, although it may be.

Filterable viruses are the cause of such infectious diseases as small pox, yellow fever, rabies, etc. This particular filterable virus is supposed by Rous, Gaylord, and others to be a living organism, but as it has not yet been seen, it seems to me a waste of time to argue the matter. The one fact that stands out is, that if an emulsion of chicken sarcoma is filtered and injected into a healthy chicken, a sarcoma of the same type develops. We know that the cancer cell breeds true to the tissue from which it springs, and that wander cells may develop into metastases. Is there anything more wonderful in the filterable virus of a chicken sarcoma, starting a metastasis, as it were, in another chicken, than the growth of a metastasis from a wander cell in the same individual? In the one case we are dealing with the extract of a cancer cell, and in the other with the cell itself.

When we come down to cellular extracts we are coming into the region of hormones again. Does the cancer cell produce a hormone? If it does, then the observation by Peyton Rous of the transmissibility of chicken sarcomata can be explained quite apart from the hypothesis of a parasitic living organism.

A hormone, to quote the dictionary again, is "a substance generated within an organ, as the suprarenal bodies, ovary, etc., which, when carried by the blood to an associated organ stimulates the latter to functional activity".

The cancer cell is the casket of its own secret. We know that normal cells perform extremely complicated chemical decompositions to rid themselves of waste products; that they produce intracellular digestive ferments. We know that cancer cells differ but little morphologically from normal cells. In cancer of the stomach or pancreas, the cancer cell produces pepsin or trypsin respectively. But there is one thing in which the normal cell is not in the same class with the cancer cell, and that is fecundity. Germ cell and cancer cell are on the same par here. If a hormone is the cause of the cancer cell's growth, then oxygen will do the rest.

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THE CLIMATE OF MAINE.*

BY W. T. ROWE, RUMFORD.

In these days of modern exploitation, when town, city and state strive by novel and interesting ways to set forth to the rest of the country their natural advantages, prosperity, and prospects, when boards of trade are busy planning ways and means for booming their respective localities, climatic conditions form a powerful factor in influencing the public mind. The prevailing opinion outside the State of Maine is that we are a typical backwoods people—"Way down East", you know, with the rising inflection and good-natured ridicule.

"You have a hardy fisher-folk along the coast", our visitors say, "busy with the elusive herring and succulent short lobster; inland, the sturdy woodsman, who applies his energies to hewing logs and shooting bears from his back door, deserves our entire approval. He is so picturesque and genuine". *This* seems to be the limit of their knowledge and interest in the corner of the earth we love so well, and the fault is entirely our own.

Although we recognize the commercial principle, "It Pays to Advertise", yet we must concede that the wonderful physical features, natural resources and untold wealth of Maine have not received in the past sufficient publicity, or, in other words, we have failed to appreciate the potency of scientifically advertising the marvelous riches within our borders.

The remedy for this dereliction of duty suggests itself. A campaign of enlightenment should be set afoot so that people without may learn something of our real greatness and help in its development. As a beginning to this end, I propose to set before you the physical grandeur and beauty of Maine and her splendid climatic conditions—not an exhaustive treatise by any means, but as much as time and space will permit.

Maine is the largest and, from a climatic standpoint, the most interesting of the New England States. Situated at the northeast corner of the United States, it lies between 43° and 47° north latitude and between 66° and 71° west longitude. The forty-fifth parallel of latitude crosses the State within thirty miles of its geographical center, and placed, as it is, almost equi-distant between the North Pole and the Equator, a moderate temperature and variable winds result. The area of the State is 33,000 square miles, of which 29,895 square

*Thanks are due to Guy Hinsdale, M. D., Hot Springs, Va., who furnished valuable data from the records of the American Climatological Association.

miles are land—the single county of Aroostook being larger than Connecticut and slightly smaller than Massachusetts.

That we may have a better understanding of the climate and the various factors which tend to influence it, we shall deal somewhat briefly with the topography of the State. To do this orderly let us consider it under two separate heads; first, the coast line, with its harbors, islands and bays, and secondly, the interior, its mountains, lakes and rivers.

The coast of Maine forms the north shore of the Gulf of Maine, that broad expanse of water lying between Cape Cod and Cape Sable. It extends in a northeasterly and southwesterly direction, conforming somewhat to the general direction of the rock strata of the State, and is remarkable for its numerous indentations. Its harbors are well protected by outlying islands and headlands, and offer almost ideal facilities for maritime pursuits. The coast, if stretched out in one direction, would extend about 3,000 miles. A remarkable fact in this connection is that, in spite of its rough, jagged and sometimes precipitous character, it has an arrestingly brief history of shipwrecks.

Beginning at the Canadian border, the most important islands are Campobello, Grand Manan, English possessions, yet well within our territory; Mount Desert, Deer Isle, Fox Islands, Isleboro, Vinal Haven, North Vinal Haven, Monhegan, St. George's, Squirrel Island and the islands of Casco Bay, about 365 in number, the largest being Great Chebeague. The highest projections of land on the seacoast are Kittery Point, Cape Elizabeth, Harpswell, Phippsburg, Pemaquid, Gouldsboro, Machias and Quoddy Head. They and the islands form a number of well-protected and deep bays, the largest of which are Penobscot, Passamaquoddy and Casco. Portland Harbor, lying in Casco Bay, is among the best on the Atlantic coast, and is rightly considered by many to be one of the most beautiful in the world. It is well sheltered, deep enough to float the largest ships, and is never entirely closed by ice. Others harbors of note are Eastport, Machias, Boothbay, Rockland and Belfast, each offering a safe port the whole year. The river ports of Calais, Bangor, Bucksport, Wiscasset and Bath afford good anchorage in nearly all seasons.

Leaving the coast line for the interior, we observe the hilliness of the State, one of its most characteristic features. The hydrographic survey of the State gives 600 feet as the mean elevation of the whole area. The coast itself has only *three* high elevations, Agamenticus, in York, 672 feet; Megunticook, in Camden, 1,450 feet, and Green Mountain, in Mount Desert, 1,500 feet above the sea level.

Considering the surface of the different parts of the State, we find that the whole is mainly divided into two slopes, one ascending

from the coast inland for 140 miles, and covering an area of 24,000 square miles, and the other, a counter slope of 78 miles, commencing at the summit of the first, stretching over a territory of about 7,400 square miles. Along the northwest border of the State, close to the boundary line of New Hampshire, are the Highlands, averaging 2,000 feet, but with single peaks reaching much higher. From here there is a general slope eastward, so that the eastern part of the State is much lower, and has but slight elevation along the coast comparatively.

The divide separating the two slopes has an elevation in the west of about 1,800 feet and 600 feet in the east. This region of elevation is considered by geologists to be a continuation of the great Appalachian or Alleghany chain of mountains, which rises in northern Georgia, and, extending northeasterly, manifests itself in New York in the Catskills and the Adirondacks, losing in elevation by diffusion, until in New Hampshire the peaks again rise in magnificent grandeur as the White Mountains, justly termed the Switzerland of America. The mountains of Maine differ from the Appalachian chain in *this*, that they consist not of ridges but of conical peaks, generally isolated but sometimes gathered in clusters, one of which is Mount Katahdin, reaching to the height of 5,384 feet. The summits are quite bare of dirt, bold and forbidding, being for the most part the outcroppings of rock, but the bases are heavily wooded with spruce, hemlock and white pine. The lumber interests are a source of great wealth to the State of Maine.

Scattered throughout the State most evenly are the lakes and ponds, about 1,700 in number. It is a fact worthy of note that there are in the world but three or four districts of the same area, and as habitable in other respects, where an equal number of lakes can be found. With a combined area of 2,200 square miles they are distributed about one to every twenty square miles of territory. Maine contains more lake surface than the million square miles of the central and western districts of this country below the Great Lake belt. Not only for their number and extent are they famed, but also for their natural beauty and picturesqueness. The most noted are Moosehead, the Rangeleys, Belgrade and Sebago. A large number of the lakes, being situated in the mountain regions, have great elevations, which give tremendous power to the rivers and streams as they seek their way through fertile valley and deep ravine to the sea. The purity of the water of these mountain streams, supplied also by thousands of mountain springs, contributes greatly to the physical health of the State. The official map of the State gives a total of 5,151 streams, only seven of which connect the interior watersheds with the sea. The secondary or seaboard system has nineteen streams running in-

land from twelve to fifty miles. Chief among our rivers are the Penobscot, Kennebec, Androscoggin, St. John, Allagash, St. Croix and Piscataqua.

Having refreshed our minds with these few facts, we can readily understand why Maine has a climate more remarkable than any of her sister New England States. Especially is her summer climate to be recommended. The coast climate of New England varies greatly according to exposure to the south and the west winds. Maine's coast line, being almost easterly, has the south wind brought over the sea, rendering it cool and refreshing during the hot months of summer; but farther south, towards Boston, this same wind is hot and overland. *Further*, the south shore, north of Cape Cod, is exposed to the northeast winds, which are apt to be cold and raw, while Maine's coast is almost entirely free from them. The sea breeze is an interesting feature of the coast, and on it depends much of the pleasure of our summer life. Usually it begins at nine or ten in the morning and continues until about four or five in the afternoon. The rate of the breeze averages from ten to fifteen miles per hour. The yearly movement is about the same as Connecticut and a trifle less than New York, about 72,000 miles. Our winds are variable, not constant, like those of the tropics, nor periodical, like those of the Indian peninsulas. They prevail from all points of the compass, but rarely for more than three or four days successively.

The average summer temperature of the State is 62° . Comparing it with the mean summer temperature of New York, Wisconsin, Iowa and Dakota, on the same degree of latitude, we find it averages about thirty per cent. less than that of those places. Even the interior, unaffected by the cooling sea breeze, is kept low by reason of its elevation. The winter climate is cold and exhilarating, and occasionally somewhat severe. During this season there is a wider divergence of temperature between the coast and the interior. The mean winter temperature of the latter is 14° , while the coast has a mean temperature of 22° , making the mean winter temperature for the whole State about 18° . Again comparing with places west, in the same latitude, we find that the winter temperature of Maine is by no means abnormal; on the contrary, it is most satisfactory. This is due to the kindly influences of the sea, the effect of which in this latitude is to lower the mean temperature in the summer and raise it in the winter. The mean temperature for the year is about 45° , the daily range being 15° to 17° .

Considering the rainfall of the State, the records of twenty places over a period of thirty years give a mean rainfall of forty-four inches. Records of fifteen places west of Maine for the same length of time show

that the rainfall of our State is about thirty-five per cent. in excess of those places. Rain in Maine is very uniformly distributed throughout the different seasons and this evenness of distribution, which is one of our chief assets, not only accounts in a great measure for the great fertility of the soil, but also saves us from protracted and frequent droughts on the one hand, and from excessive and prolonged rainfalls, with their consequent danger of floods, on the other. Scientists attribute this happy physical condition to our extensive forests. The mean depth of snow is eighty-three inches, corresponding to about seven inches of water. Blizzards, waterspouts, cyclones, cloud-bursts and floods, so destructive to life and property throughout the West, are unknown here. As one writer aptly expresses it, "Our trees and wooded hills are sentinels of safety, and our quiet valleys are the abodes of peace and security".

Another source of moisture worthy of mention is the Maine coast fogs, which, because of their peculiar action on the atmosphere, have frequently been termed dry fogs. They are often light and vapory and leave the air with a peculiar sense of dryness. In marked contrast to these are the heavy, drenching and extremely wet fogs of the south shore of New England. Referring to fogs and sunshine, recent statistics of the cloudy and clear summer days of Maine compare most favorably with those of Colorado. Several papers presented at the American Climatological Association's meetings in the past few years have called attention to the favorable conditions of Maine's climate for the restoration of health. The summer climate along the coast, with its cool sea breezes and numerous and beautiful islands, yearly attracts thousands of visitors. The invigorating air is most beneficial in restoring health to those convalescing from acute diseases, the infirmities of old age, nervous exhaustion and the common and psychological disease known as "that tired feeling".

The dry, pure air of the hills, covered with pine forests, is especially gratifying and helpful to the unfortunate victims of pulmonary troubles. Not more than thirty years ago statistics showed an alarming prevalence of tuberculosis in our State, about twenty deaths to every 10,000 persons. This rate was greatly in excess of that in the states farther south. Medical men began seeking the cause, and, without due investigation, found it to be the severity of our winters. To-day they know better. Not to any fault of climate, but rather on artificial conditions of modern living, should the blame be rightly placed. Foul air poisoning, poor ventilation, over-heated rooms, the improper use of oil and gas stoves; these have been the causes. The climate of our winters seems to have the advantage of our warm season, or at least to be as helpful and, in some respects, superior in the

treatment of certain diseases. Pneumonia, bronchitis, la grippe and colds are listed as the cold weather diseases. Explorers in the polar regions, however, have found those parts singularly free from such diseases, and, returning, suffer from la grippe, colds, etc., soon after reaching civilization. Recently, a prominent Maine official, after wintering and roughing it in our woods for some time, became the victim of a violent attack of pneumonia, following one night's exposure to the foul air of an ill-ventilated hotel room. In the past the value of special climates in treating tuberculosis has been greatly overestimated. Mildness of climate is no doubt a convenience in most cases, but that the consumptives of Maine recover more quickly than those of Southern climates, and that this recovery is more rapid in the winter than in the summer is a well-established fact. Farther south altitude must be sought to lower temperature, whereas in Maine the general altitude provides elevation sufficient not only to secure a suitable temperature, but also to escape the fogs of the sea, river, lake, which lessen the amount of sunshine and dryness, such important elements for physical well-being.

Climatic conditions have little direct action in determining the extent or prevalence of tuberculosis. In the vigorous climates of Iceland, the Hebrides, Greenland and the Russian Steppes, where the population is scattered or the infection has not been introduced, the disease is practically unknown. In 1892 the systematic registration of deaths began in this State. Since that time the deaths per thousand, by educational efforts of the State Board of Health, ably assisted by the press, have been decreased almost fifty per cent. More and more is the fact recognized that the consumptive receives most benefit from the prescribed treatment in his native air. It seems, therefore, ethically unsound and a waste of energy and money to advise those living in other states to go to Southern California, Colorado or South Carolina to seek a cure. For, even though their cases be arrested there, statistics prove they almost invariably suffer a fresh attack on returning home and resuming their former mode of living. Especially should this truth be impressed on tubercular sufferers in Maine. You will all agree with me that nowhere in the country will they receive more scientific treatment than at home, and that in no other place in the world is Mother Nature more bounteous in supplying those elements which are necessary for the restoration of health.

Let the dictum go forth that with an ideal summer climate, a vigorous and healthful winter one, a land richly endowed by nature with beautiful lakes, rivers, harbors and mountains, extensive forests abounding with large game, the best bass fishing in the United States at the Belgrade lakes and the best trout fishing in the world at the

Rangeleys, we may well be proud of our State and invite inspection.

Year by year the number of visitors during both the summer and winter increases, and to-day Maine realizes an annual income of from twenty to thirty million dollars from them. Let us hope that our own people will profit by the wisdom of their neighbors, and that the exodus from our native State for the fountain of youth will yearly grow less and less.

DISCUSSION.

THE PRESIDENT: The discussion on this interesting paper will be opened by Dr. E. McCarty, of Rumford.

DR. MCCARTY: *Mr. President, and Gentlemen and Ladies of the Maine Medical Association:*

A prominent New York clergyman once made the statement that the products of Maine were men and ice. As I have been listening to Dr. Rowe's paper, I have been wondering what the climate had to do with the men; for, certainly, if the climate is responsible for the men sent out from this State, we have something to be proud of.

One idea that has occurred to me, if so many people find this climate so delightful in summer, are there not many more who would find it an equally delightful place to regain their health. You hear a great deal at the present time about the sewerage system of the human body. Did it ever occur to you the perfect sewerage system which our rivers afford? If you follow along the valleys of the Androscoggin, the Kennebec, the Penobscot, or any of the smaller rivers, you must be impressed with the perfect system of drainage which those rivers afford. This one fact alone, I think, is responsible to quite an extent for the healthful condition of our State. Outside of the State it is the general opinion that our winters are too severe to be suitable for the treatment of disease. A great many people, however, find this climate especially invigorating, and during the past few years Maine has begun to take her place as a winter resort. This has been demonstrated by the Rickers, our genial hosts of last year, to whose place a great many people now go during the winter months, where they indulge in all kinds of outdoor sports. In former years the annual pilgrimage was to the coast. Very little was known of the northern part of our State, that great wilderness which has since become famous for its hunting and fishing, namely, the lake region. The lakes of Maine are second to none in the world, especially the Rangeleys. The greater part of you are familiar with them. Probably many of you have stood on the summit of that high hill in the town of Upton, where, with the exception of the Rangeley Lake itself, you can see the whole chain which goes to make up this famous chain of lakes. Practically speaking, those lakes are undeveloped, but the opportunities which they afford would equal or exceed the entire manufacturing industries of the State. A few years ago there was a great fight in the legislature and the cry at that time was to save the lakes of Maine. The question at that time was the lowering of the level of the Rangeley Lakes. The attempt to lower that level was defeated, but, as a result, a new lake was created which was not only a great achievement in mechanical engineering, but also has added materially to the beauty of the lake. I hope that at some time a movement may be set on foot whereby the State of Maine can take over a certain portion of land adjoining those lakes, so that their natural beauties may be preserved. The natural spawning beds of the lakes should be retained, and the lakes developed to a higher point of efficiency.

A short time ago a Massachusetts man made the statement that there were more pine trees growing in the State of Massachusetts than in the State of Maine, and, unless Maine watched out, Massachusetts would absorb her title of the Pine Tree State. Well, I doubt very much the truth of that statement, yet it shows that other states are trying to produce artificially that which we possess naturally.

One thing is certain! Nature has endowed the State of Maine with a great many natural advantages. The question arises, are we grasping those opportunities and developing them to the best of our abilities? Maine is a good State to be born in, it is a good State to live in, it is a good State to work in, and it is a good State to die in. (Applause.)

THE PRESIDENT: The next speaker will be Dr. Olin Pettengill, of the Hebron Sanatorium.

DR. PETTENGILL: Mr. President, this paper of Dr. Rowe's is one of the most interesting on the climate of Maine that it has been my pleasure to hear. His description of the geographical features of the State is very interesting, because he explains the effect these features have upon the climate. In treating pulmonary tuberculosis, we find that there is no specific climate for this condition. Any climate that offers attractions out-of-doors and is comfortable to live in is as near specific as any other. The resorts of New Mexico, Arizona and Colorado claim only slightly better results than we do in the New England States. It has been my fortune to treat tuberculosis in three New England States, as well as New York State, and I find that patients taking treatment in the fall and winter months, that is, the favorable types of incipient and moderately advanced cases, generally show more improvement in these months than at any other time of the year. This, I think, is due to the fact that cold is a stimulant to general metabolism. It is a common remark that one month in the winter is as good as two months in the summer for people taking treatment. The number of tourists visiting Maine in the winter months is constantly increasing. Mr. Ricker had over 1,500 guests last winter at Poland Spring, a marked increase over the number formerly visiting there. I see no reason why, with our snow-covered hills, the State should not become as popular a winter resort as some of the celebrated resorts in Switzerland.

NEW AND NON-OFFICIAL REMEDIES.

Fibrin Ferments and Thromboplastic Substances (Kephalin).—The clotting of blood has been shown to be due to the action of the fibrin ferment on the fibrinogen of the blood. The fibrin ferment (thrombin) exists in the blood in the form of prothrombin, which is converted into thrombin by the action of calcium and thromboplastic substance (thromboplastin). Kephalin, prepared from the brain, has the properties of thromboplastin. Preparations containing thromboplastin are said to be useful, when applied locally, in the treatment of hemorrhages, especially hemorrhages from oozing surfaces, scar tissue and nosebleeds. The intravenous use of thromboplastin in certain conditions has also been proposed.

Brain Lipoid—Impure Kephalin.—This is an ether extract of the brain of the ox, or other mammal, prepared according to the method of Howell and Hirschfelder. It has the properties of thromboplastic substances described above. It may be applied direct to the tissues or on sponges or pledgets, or it may be used in the form of an emulsion with sodium chlorid solution.

Solution Brain Extract—Solution Thromboplastin—Hess.—An extract of ox brain in physiologic salt solution prepared by the method of Hess. It has the properties of thromboplastic substances described above. The solution may be applied directly to or sprayed on the tissues or by means of a sponge or tampon.

Galactenzyme Tablets.—Tablets containing a practically pure culture of bacillus bulgaricus. For administration in intestinal fermentative diseases. Put up in bottles containing 100 tablets each and bearing an expiration date. The Abbott Laboratories, Chicago.

Galactenzyme Bouillon.—A pure culture in vials of bacillus bulgaricus, each vial containing about 6 c. c. Used internally for intestinal fermentative disorders and topically in nasal, aural, throat, urethral and other affections when the use of such a culture is indicated. Put up in packages of 12 vials each. The Abbott Laboratories, Chicago.

Ampules Mercuric Salicylate—Squibb, 0.065.—Each ampule contains 0.065 Gm. mercuric salicylate, N. N. R., in 1 c. c. of sterile suspension. E. R. Squibb & Sons, New York.

Ampoules Quinine Dihydrochloride—Squibb, 1 Gm.—Each ampule contains 1 Gm. quinine dihydrochloride, N. N. R., in 2 c. c. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine Dihydrochloride—Squibb, 0.5 Gm.—Each ampule contains 0.5 Gm. quinine dihydrochloride, N. N. R., in 2 c. c. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine Dihydrochloride—Squibb, 0.25 Gm.—Each ampule contains 0.25 Gm. quinine dihydrochloride, N. N. R., in 2 c. c. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine and Urea Hydrochloride—Squibb, 1 Gm.—Each ampule contains 1 Gm. quinine and urea hydrochloride, N. N. R., in 2 c. c. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine and Urea Hydrochloride—Squibb, 0.5 Gm.—Each ampule contains 0.5 Gm. quinine and urea hydrochloride, N. N. R., in 2 c. c. of sterile solution. E. R. Squibb & Sons, New York.

Ampules Quinine and Urea Hydrochloride—Squibb, 0.25 Gm.—

Each ampule contains 0.25 Gm. quinine and urea hydrochloride, N. N. R., in 2 c. c. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine and Urea Hydrochloride—Squibb, 1 per cent.—Each ampule contains 5 c. c., of a sterile 1 per cent. solution of quinine and urea hydrochloride, N. N. R. E. R. Squibb & Sons, New York.

Ampoules Sodium Cacodylate—Squibb, 0.13 Gm.—Each ampule contains 0.13 Gm. sodium cacodylate, N. N. R. E. R. Squibb & Sons, New York.

Ampules Sodium Cacodylate—Squibb, 0.05 Gm.—Each ampule contains 0.05 Gm. sodium cacodylate, N. N. R. E. R. Squibb & Sons, New York (*Journal A. M. A.*, Aug. 5, 1916, p. 437).

Arbutin—Abbott.—A non-proprietary brand complying with the standards for Arbutin N. N. R. The Abbott Laboratories, Chicago (*Journal A. M. A.*, Aug. 19, 1916, p. 586).

Ampules Mercury Iodide (Red) 1 per cent. in Oil—Squibb.—Each ampule contains 1 c. c. of a solution of red mercuric iodide and anesthesin, each 0.01 Gm., in a neutral fatty oil. E. R. Squibb & Sons, New York (*Journal A. M. A.*, Aug. 19, 1916, p. 586).

Hay Fever and Its Complexities.

Because of the protean manifestations of hay fever and its irregular appearance, either as the early-summer variety or the so-called autumnal catarrh, it is evident that no single therapeutic agent can eliminate, or even modify, the symptoms in all cases. Each individual sufferer presents problems that pertain peculiarly to himself, and other than the vasomotor relaxation of the upper respiratory tract, which is common to all, there are no uniform underlying pathologic changes.

These cases may be divided into three classes: those in which the neurotic element is the predominating feature; those wherein a general systemic condition, as lithemia, seems to stand out conspicuously; and—much the largest class—those in which the affection is intimately associated with the presence of pollen in the atmosphere.

Undoubtedly the suprarenal substance, in the form of its isolated active principle, Adrenalin, is one of the most reliable agents for the treatment of hay fever. Experienced physicians assert that it successfully controls the symptoms in a large majority of cases. Adrenalin Chloride Solution and Adrenalin Inhalant are the preparations most commonly used, being sprayed into the nares and pharynx. The former should first be diluted with four to five times its volume of physiologic salt solution. The latter may be administered full strength or diluted with three to four times its volume of olive oil.

BULLETIN No. 9**Reasons Why Physicians Should Patronize Advertisers in Their Own State Journal**

The reasons why physicians in other states should patronize the advertisers in their Journals, apply as well to you and your Journal. It's perfectly simple: if you will buy goods from the advertisers, you will have a better Journal. Read the "reasons why":—

ARIZONA:—Business firms in other states spend their money in the advertisements to bring the market to us. Ought we not appreciate this and buy goods from them?

ARKANSAS:—These advertisers would not be here if they were not reliable. Your support protects you, helps us, and pleases them.

CALIFORNIA:—The firm that does not advertise its goods to you, does not feel under obligation to sell you what you order. It pays to buy the advertised article.

COLORADO:—This is your Journal. The advertisers help support it. Tell them you saw their announcements in your Journal.

FLORIDA:—We urge our readers to look carefully over our advertising pages, and let it be known we are a live profession and have needs to be filled.

GEORGIA:—Every member of the State Association has an interest in the advertising columns. If one firm advertises and another does not, patronize the one that does. It is money in your pocket.

INDIANA:—It costs you only a 2 cent stamp to write any one of our advertisers, all of whom are anxious to get in touch with you by sending you either samples or catalogs.

IOWA:—Quite a good deal of our advertising is on trial, and unless our readers demonstrate their interest in it, we will lose it.

KANSAS:—Every advertiser in this Journal is paying you for the privilege of telling you about the things he has to sell.

KENTUCKY:—You may depend on our advertisements as a safe and sound business directory.

MAINE:—Look through the advertising pages each month. Place orders with these concerns. Specify their products on your prescriptions.

MARYLAND:—Our readers may depend on the integrity of our advertisers. Reciprocity is not only desirable, it is a good business principle.

MICHIGAN:—Answer the advertisements. This is important. If you are busy, have your wife do it.

MISSOURI:—Anything in the line of physicians' supplies or equipment, can be obtained from firms advertising in the Journal.

NEBRASKA:—The Journal desires to introduce you to the merchants whose goods are advertised, and ask that you become their patrons.

NEW JERSEY:—If the goods advertised in this publication are equal in quality (and we hold they are superior in many respects) you should purchase them in preference to those not advertised with us.

NEW MEXICO:—Write: "I saw it in the New Mexico Medical Journal" whenever opportunity offers. Let us all pull together.

NEW YORK:—Any Medical Journal printing the fraudulent claims contained in the advertisements of the nostrums condemned by the Council on Pharmacy and Chemistry is an accessory to this act of thievery and the subscriber to such journals voluntarily assumes the position of an accomplice.

NORTHWEST:—Prove to our advertisers that advertising in Northwest Medicine is a paying investment. Don't forget to state that the business is sent their way because they advertise in your Journal.

OHIO:—Every dollar spent with our advertisers, is a dollar contributed directly to the betterment of your Journal.

OKLAHOMA:—Many of us no doubt are spending in the aggregate large sums of money with houses and companies who never spend anything with us. It is not good business policy to follow such a shortsighted plan.

PENNSYLVANIA:—Most of our members throw circulars in the waste basket and refer to the advertising pages of the Journal for needed information.

SOUTH CAROLINA:—We could not run a Journal without the advertisers, and our constant effort has been to accept only the highest class of business.

TENNESSEE:—The advertisers of the Journal are dependable concerns, who offer the best that is to be had. You are protected when you buy from them.

TEXAS:—Our advertisers are guaranteed to us, and we in turn guarantee them to our readers. Is that worth anything to the prospective buyer?

VERMONT:—If any advertiser is not absolutely honest in his practice, his business is not acceptable.

WEST VIRGINIA:—When writing advertisers, please be sure to mention the fact that you are writing them because you have felt that they deserve support since they are carrying space in our advertising pages.

WISCONSIN:—Goods and institutions advertised in this publication are absolutely reliable, and every dollar spent with your advertisers is a dollar contributed directly toward the maintenance of your Journal.

We urge every physician who reads this, to adopt these excellent recommendations in his own practice. Do it for the advancement of ethical medicine; for the immediate benefit it will be to you personally in securing reputable goods, and just prices; to encourage reputable firms to patronize your Journal and for the satisfaction and pride you will have, as a joint owner, in the success of your own Journal.

YOUR EDITOR.

Correspondence.

BRUNSWICK, MAINE, August 14, 1916.

DR. FRANK Y. GILBERT,
148 Park Street,
Portland, Maine.

Dear Doctor:—I am enclosing report of our committee presented to the Maine Medical Association in June.

During the year the committee has continued its work along the lines set forth in the report of 1915, as offering the most at the present time in this State, as follows:

1. Assisting in awakening the people of Maine to the dangers of venereal disease.
2. Assisting in some degree in establishing higher ideals of sexual morality.
3. Arousing parents to a sense of responsibility in regard to the sexual morals of their children.
4. Calling the attention of parents to the need of developing in their children a feeling of responsibility in regard to the health and welfare of their future families.
5. Assisting in awakening public opinion to support officers of sanitation in applying modern hygienic methods to the control of venereal disease.

The distribution of educational pamphlets dealing with sex hygiene, with carefully worded individual letters explaining the work to parents, has been continued, with still no word of criticism. The work has been called to the attention of many teachers, superintendents of schools, physicians, clergymen, lawyers, business men and others interested in the welfare of the youth of this State.

The committee has made a rather extensive study of the work of prevention of venereal diseases throughout the country by means of questionnaires to the boards of health of all of the states and territories, and of a number of cities. The statistics gathered indicate that the importance of the dangers of venereal infection and the prevention of venereal disease is being recognized more and more in all parts of the country. The number of states taking active measures for the control of these diseases is increasing every year. Whereas in 1912 only two states had laws requiring the reporting of venereal diseases to the state boards of health, twelve states and one territory now have such laws or regulations. Twenty-seven states and one territory

now provide free laboratory diagnosis of venereal diseases in some form.

In spite of the advance in the work of prevention, the financial aid available for this work is still very small in view of its importance, and altogether insufficient in most parts of the country as compared with the amounts expended for tuberculosis and other communicable diseases.

The general interest shown in the work of our committee and the numerous letters of commendation received have been very encouraging. During the past year there was received in contributions to aid the work, \$298.00. In addition, the chairman received in trust twelve shares of stock, the income from which at the present time is \$72.00 a year. In accordance with the wish of the donor, this stock is ultimately to be turned over to the Maine Medical Association to establish a fund, to be known as the Prince A. Morrow Memorial Fund, the annual income to be devoted to the promotion of social hygiene work in Maine along ethical and scientific lines. At the last meeting of the Association our committee was continued, and \$25.00 was appropriated to aid in the work of the coming year.

Parents are beginning to realize the necessity of early instruction in matters of sex. The social diseases, a few years ago forbidden discussion, are receiving the consideration of many thoughtful citizens. The public believes more than ever before that modern hygienic methods should be applied to the control of venereal disease. The committee hopes that its work is contributing to the new conditions.

To carry on the work further more funds are necessary. Your help and co-operation will be much appreciated.

I enclose list of subscriptions received since the last report was presented.

Very sincerely yours,

F. N. WHITTIER.

SUBSCRIPTIONS RECEIVED SINCE JUNE 7, 1916.

Maine Medical Association,	\$25.00
Mr. T. W. Longley, Oakland,	2.00
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Notices.

Prevention of Infantile Paralysis.

To control the present epidemic of infantile paralysis, according to a statement issued by the United States Public Health Service today, the chain of infection between persons harboring germs of the disease and the well members of the community should be broken. Infantile paralysis is probably caused by a very minute organism found in the nasal, mouth and bowel discharges of those who have the disease or who are carriers of the germ without themselves suffering from the ailment. All of the steps in the spread of the infection are not known, but if this germ can be prevented from passing from the infected to the well person, the disease will cease.

Infantile paralysis is not a disease of recent origin. Sporadic or scattered cases have occurred throughout the country for many years, but it is only during the last decade that the infection has assumed epidemic proportions in the United States. The present epidemic in New York City, on account of its magnitude and virulence, has awakened the residents of many communities to the danger of the importation of the disease into their own midst. This danger is real, but if due precautions are exercised it is believed that the epidemic will subside.

The actual control of the present epidemic must be left to the city, state and federal health authorities. These organizations will properly quarantine and care for affected persons, prescribe sanitary measures and limit as may be necessary the travel of individuals in order to protect neighboring districts from the infection. Individuals and communities, however, can do much toward their own protection.

Poliomyelitis is probably spread directly or indirectly through the medium of infective secretions. Account must therefore be taken by communities of every means by which such secretions are disseminated. Promiscuous expectoration should be controlled. The common drinking cup affords a method for the interchange of material of this nature and should therefore be abolished. Rigid cleanliness of glasses and utensils at soda fountains, in saloons and other public places should be enforced. Flies, roaches and other vermin, by coming in contact with infective secretions, may possibly convey them to our food and thus directly bring about the development of disease.

Therefore eliminate insects. Street and house dust bear a definite relation to the spread of many infections and it is not unreasonable to presume that they may be a factor in the dissemination of infantile paralysis. Maintain strict cleanliness of streets, yards and alleys in order to prevent the breeding of insects and other vermin. See that all garbage and waste are properly cared for and collected at regular and frequent intervals. Guard all food supplies, especially milk and other perishable products. Digestive troubles of children arising from the ingestion of food of questionable quality may lower resistance. Assemblies of children in infected localities are to be discouraged, if not actually forbidden. While the above measures are in a sense general, and applicable to many epidemic diseases, their importance should not be overlooked.

Individual preventive measures may be thus summarized:

Summon a physician at once and immediately notify the health officer of the presence of the disease. If the disease is present in the community, medical aid should be sought whenever a child is sick, no matter how light the illness; many cases of infantile paralysis begin with a slight indisposition. Should the illness prove to be infantile paralysis isolate the patient, place a competent person in charge, and reduce all communication with the sick room to a minimum. Hospital care is preferable, not only for the child but in order to better safeguard against the spread of the disease. The sick room should be well ventilated and screened. Nasal and mouth secretions should be received in cloths, placed in a paper bag and burned. The clothing of the child, the bed linen, and the excretions should be disinfected in the same manner as for typhoid fever, that is, by boiling, the long-continued application of 5% carbolic, or other well recognized disinfectant. The same is true for dishes and drinking vessels. Nurses should exercise the same precautions as regards cleanliness of hands in caring for infantile paralysis patients as for those afflicted with other infectious diseases.

A child may convey the disease to others even after a lapse of several weeks. For this reason quarantine should be maintained for a considerable period, usually from six to eight weeks, and the above precautions should be adhered to during this time. Disinfection of the room following recovery is advisable.—*U. S. Public Health Service.*

Abstracts from Current Literature.

Time Saving in Operations.

A very valuable paper on this important topic appeared in the *British Medical* in May last, but even at the risk of appearing late with our remarks concerning it, the topic remains so permanently valuable that we favor our readers with a resume of a question so important in saving surgical shock and even life itself.

Dr. Edward Harris, the writer, urges, to start with, co-operation between the staff and the nurses, and then between each nurse in attendance on the operation. Each nurse should know just what to do. Every surgeon should learn nimbleness of fingers for suturing and knotting, by practice with cat's cradle and strings. Before ether, rapidity was coarse, but effective, to save pain and shock. There still remains the same need to save shock as of old. Learn how to use a thimble on the third finger, holding work with thumb and two first fingers, for deep sutures especially. With the omentum tied and cut off you want to bury the stump to avoid adhesions, and it can be invaginated and the mass held in the left hand whilst the right does the suturing. A straight needle can be used more rapidly than a curved, and often in places where, without practice, it might be thought impossible. Use a shorter one, with a thimble, and you will be more rapid in work. Even in vaginal operations, short, straight needles are possible and rapid.

Learn to knot with one hand, practicing with string in button-hole of own coat, up to perfection. Thus in long breast incisions, with forceps holding vessels needing to be tied, roll off catgut in right hand, pass around forceps held by house surgeon, tie with left, hold with left whilst assistant cuts off sutures. Whilst he is doing this, right hand ligates the next vessel, and so on, making it rapid, expert work very soon, with practice.

With interrupted sutures, the thimble, with single-handed knotting, helps immensely, for you don't have to pick up the needle; the needle never leaves the fingers.

Use as few instruments as you can—dissecting forceps, a toothed forceps, one pair of scissors, two scalpels, ten clips and six needles. A pear-shaped eye to the needles is the best of all, or a calyx-eyed needle with two slots. A self-threading needle used to be common in England, but is now hard to find. Use a straight needle every time, and never use a curved needle unless absolutely imperative.

Scalpels should be round ended, like a dinner knife, and then they are elegant for dissecting out glands. With such you save the time lost in dropping the knife, picking up the scissors and getting them fitted into your fingers for use. For forceps the box joint is preferable to the take-off joints, for the take-offs may fall apart in lifting from the table. With routine boiling of instruments there is no old-fashioned need of take-off joints. Large rings on scissors facilitate dropping them when no longer needed, and a slight projection on each side raises the rings from the table so that they can be lifted without having to push them along, and so lose time.

Without going into further details, the reader of surgical improvements is herewith advised to hunt up the original paper in the *British Medical* for May 6, and in reading that he will find a long list of time-saving suggestions of use in surgical operations of to-day. Truly this is what may be called a delightful and refreshing essay.

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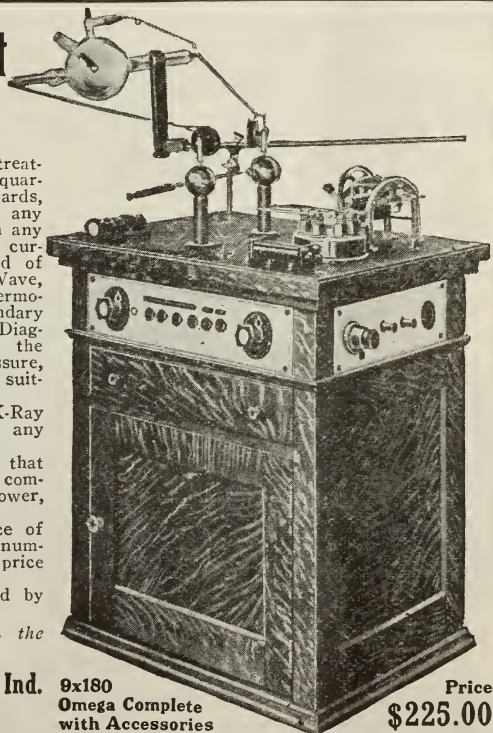
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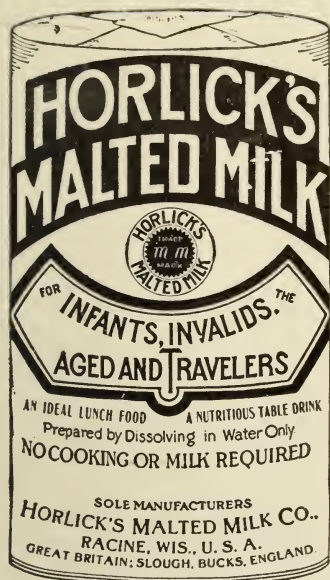
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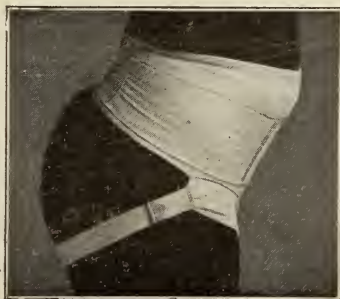
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THE JOURNAL

OF



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Maine Medical Association.

The Official Organ of the State and County Medical Societies.

VOL. VII, No. 3

OCTOBER, 1916.

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TABLE OF CONTENTS

Original Articles—

Digitalis Therapy.....	69
On the Death of Dr. James H. Shannon	97
Bulletin No. 10.....	99

Miscellaneous—

Abstracts from Current Literature ..	100
County News and Notes.....	101

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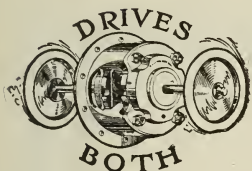
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VOL. VII.

OCTOBER, 1916.

No. 3

*DIGITALIS THERAPY.

BY FRANK S. MEARA, NEW YORK CITY.

Professor of Therapeutics, Cornell University Medical College in New York City.

Could a subject be more trite? Has he come to tell us that digitalis is used in cardiac disease? I plead guilty to both charges implied in the questions.

A subject could not be trite unless it was of common interest, and whether the "how" and the "when" of digitalis therapy has been exhausted you must decide after this talk is ended.

A medical journal published, in January of this year, one hundred and seven replies made by teachers of medicine and therapeutics to the question "What are the most important five drugs in the pharmacopeia?" Digitalis was included in seventy of these replies.

I am not going to weary you with bewildering details, pharmaceutical and pharmacodynamical, except as such knowledge has a practical significance in therapeutics, but I feel that there is much misunderstanding about the drug that ought to be cleared up, and that there are traditions about its dosage, its toxicity and its contra-indications perpetuated in one generation of text-books after another that have robbed the drug of much of its value.

The first fact of fundamental importance is that a digitalis preparation, to be active, must contain active digitalis bodies. Such a self-evident proposition almost accuses of levity in the propounding, but the actual fact that digitalis preparations are prescribed and dispensed by physicians who, in the vast majority of instances, know

*Annual oration at the 1916 session of the Maine Medical Association, held in Portland, Maine.

little of what constitutes the active elements of the preparations, less of the standardization of the preparations and how to attain it, nothing at all of their druggist's commercial conscience in purchasing and handling the drug, forces upon the proposition a gravity of some significance.

The second principle in digitalis therapy is, given an active preparation, that enough shall be given to anticipate a response. Traditional dosage is commonly insufficient. Death from lack of digitalis or inadequate dosage of digitalis I believe to be of daily occurrence; death from too much digitalis I believe to be a rare happening.

The third requirement of digitalis therapy is an appreciation of its indications, the evidences of its operation, and the signs of its accumulation.

The uncertainty of the practitioner as to what constitutes a *good digitalis preparation* is often pitiful; for the patient it is tragic. The shadow of the drug house is that of the upas tree. Innumerable preparations, accredited with all the real virtues of the drug and in addition with many fanciful extravagancies, each with a trade name suggesting digitalis "with a difference", are foisted on the physician to his confusion, so that my experience has been that it is far more common to find a practitioner using one of these than an official preparation. Let me emphatically assert my belief that official preparations are always the best, or if I am combated on the use of the adverb will assert that the rare exception but proves the rule. I believe, then, that the first step forward in digitalis therapy will be taken when physicians will confine themselves to the official preparations of the drug and eschew all of the numerous substitutions, modifications and "improvements" speciously pleading for the profits of their promoters.

All of the official preparations are derived from the leaf, and many rules have been laid down for its cultivation, its collection, handling, and so forth. It is not my province here to discuss the moot questions involving the relative merits of wild-grown and cultivated plants, collection of the leaf of the first or second year's growth, the effects of moisture and other details affecting its permanency, even were I competent to pass a judicial opinion, which I am not. These are matters that pertain to the pharmacist, but when it comes to the pharmacological potency of the drug, we who prescribe have vital interests at stake.

Digitalis owes its therapeutic effects to a number of glucosides elaborated in its leaf, no one of which represents in its entirety the action of the whole leaf or of any of the official preparations of the leaf. To two of these glucosides nearly all of the value of the leaf may be ascribed. They are digitoxin and digitalein.

"Digitalin," which needs a word of explanation, is derived from digitalis seeds and is not an official preparation. "Digitalin" is another stumbling block to the general practitioner, because he takes it for granted that it is a definite something which it but rarely is in the shape in which he uses it. To be sure, there is a definite glucoside digitalin contained in the seeds, but unfortunately the same name has been applied to active principles recovered from the plant that are not definite and identical entities, but rather mixtures of several of the glucosides, with quite different potencies. *Digitalinum purum* is not pure digitalin, but quite decidedly impure, while *digitalinum verum* (Kiliani) is probably very much nearer the real thing. The well-known and potent Nativelle's crystallized digitalin is not digitalin at all, but digitoxin, while the French digitalin of Homolle and the German digitalin (*digitalinum purum*) are mixtures of several glucosides, and "digitalin" dispensed in tablet form by one and another drug house is a guess. Probably the true digitalin of Kiliani is the most definite of these (barring the so-called digitalin of Nativelle, which should be considered digitoxin), and has a strength of pharmacological activity reckoned in milligrams per cat unit by Dr. Hatcher¹ of 1.50 against, 0.30 of crystalline digitoxin, or only one-fifth the strength. None of the digitalins are as active as digitoxin; they have no advantage over it. Therapeutically they have been less carefully studied, and I am unwilling at the present moment to add them to my list of digitalis remedies.

Setting aside all other glucosides recovered from digitalis as too little known to merit our attention we will pause for a moment over the two important glucosides of the digitalis leaf, digitoxin and digitalein.

The latter is much the weaker of the two. Worth Hale,² comparing it with crystalline digitoxin and using the frog's heart for a physiological standardization, found it only one-third as strong, while Hatcher, using the cat's heart for his standardization, found it about one-tenth as strong. It is weaker than digitoxin, then, and to my mind has no compensating advantage over the more potent drug. So much as has been said is warranted only by the fact that it constitutes almost all that is active in a much vaunted preparation which I find in all too common use by those who credit its advertisements as a soluble digitoxin.

I would advise as the first step to assured success in digitalis medication, not to go outside of the three official preparations, the tinctures, the infusion and the leaf, and if the glucosides are to be used, to restrict that usage to the most potent of them, digitoxin. I confine myself to the tincture and the infusion, using the leaf only

occasionally and the digitoxin almost never, because of a substitute strophanthin, whose advantages over digitoxin I will touch upon presently.

Granted that the assay of the crude leaf is high, and granted that the *tincture* is properly made, the tincture of digitalis is a very reliable preparation. Hatcher says that it represents the activity of the leaf wholly, but neither of the premises from which the deduction as to its value is drawn should be taken for granted. Tinctures are not always properly made; pharmacopœal instructions are not followed; weaker alcohols than those recommended are used, and although Worth Hale² has shown that weaker alcohols than 70 per cent., recommended by the Brussels conference, even down to 35 per cent., can extract the virtue of the drug, the keeping properties of the weaker tinctures are materially impaired. Worse than this has grown up the slipshod habit of making so-called tinctures from a stock of commercial fluid extracts, which Worth Hale² says "have never assayed relatively as active as the commercial tinctures". The tinctures, too, deteriorate, though nothing like so rapidly as do the infusions. One must know, then, something of the age and pedigree of the preparation he uses, or at least, as in other business dealings, must know something of the business reliability of the druggist he patronizes. Hale² quotes Edmunds as having tested seventeen tinctures bought in the open market and found them varying in strength as 1 to 4, while others are quoted as having a similar experience. It will be remembered that the strength of the official tincture is 10 per cent., *i. e.*, that every ten minims equals one grain of the leaf.

The *infusion* is an equally valuable preparation. Hatcher³ says that it represents the value of the leaf wholly. The official strength is $1\frac{1}{2}$ per cent., that is, a shade over seven grains to the ounce. It is true that digitoxin, to which the leaf owes the major portion of its activity, is insoluble in water and that the infusion is an aqueous extract, but the infusion has completely extracted the leaf, nevertheless, and this is brought about, probably, by the solvent effects of certain saponin-like bodies, *e. g.*, digitonin. This preparation, however, in spite of the small amount of alcohol added, may deteriorate with great rapidity, though Hatcher³ has shown that this is not always true. A well-known drug house in New York finds its best advertisement in the statement that it makes up its infusion of digitalis fresh every day and destroys the residue at the end of twenty-four hours. The habit of making infusions from stock fluid-extracts is still more pernicious than in the case of the tinctures. The *sine qua non* of success in the use of the infusion is a fresh infusion, made within a few hours or a day or two of the prescribing, from an active leaf. The

prescription should be used only for the digitalis series ordered at the time and not for a second series after an interval of days, when a fresh infusion should be ordered.

Of the active principles I would advise the use of digitoxin exclusively, because it is the most potent of the glucosides and perhaps the most definite in its composition, and yet the digitoxin does not represent the full value of the leaf and a chemical assay of the leaf determined by its digitoxin content fails to represent the pharmacological value of the leaf as a whole. In using digitoxin, as definite a preparation as possible should be chosen, and for this reason the crystalline digitoxin is to be preferred. Hatcher¹ found 0.30 mg. per cat unit equal to 1.20 mg. per cat unit of so-called amorphous digitoxin, a ratio of 4 to 1. Using Hatcher's figures, expressed in mgs. elide per cat unit, 0.30 of the crystalline digitoxin equals 92 of English digitalis, a ratio of about 300 to 1. Of most uncertain value are the tablets of digitalin obtained on the market, and perhaps worse yet the tablet triturates of tincture and fluid extracts. Worth Hale found these latter to vary some 260 per cent., and of the former not much better could be said.

It is extraordinary how many substances derived from plants that are botanically not akin, and even from the animal kingdom, operate on the heart after the manner of digitalis: Strophanthus, from which is derived an African arrow poison, lily-of-the-valley (*convallaria majalis*), squills (*scilla maritima*), Christma rose (*helleborus niger*), Canadian hemp (*apocynum cannabinum*), pheasant's eye (*Adonidis vernalis*), oleander (*nerium*), only to mention a part and a substance derived from the toad. With the exception of strophanthus, none of these have been sufficiently studied to warrant substitution for digitalis. Strophanthus, however, has a very real place in our therapy.

There are several varieties of strophanthus in use whose activities depend on a glucoside strophanthin, only one of which, strophanthus hispidus or Kombé, is official. The tincture and the active principle, strophanthin, are in common use.

The tincture should not be used. Confidence in it is misplaced, not because of its inactivity, but because of its uncertainty of absorption. German writers have insisted on the variability in strength of official tinctures, but Hatcher and Bailey⁴ say such variability does not obtain in our official tinctures. Their interesting studies accentuate, however, the uncertainty of their absorption. Hatcher has shown that the average dose of strophanthin, to be therapeutically efficient, is ten times the dose given under the skin or into a vein, while the daily dose is many times more. Even then there is no certainty of action, for the factors determining the rate of absorption can-

not be predetermined and allowed for, while a sudden, rapid and unexpected absorption of an average dose may prove very dangerous or fatal.

The active principle, however, the glucoside, strophanthin, when introduced into the vein or muscle, is most reliable and exceedingly prompt in its action. Its use in this manner constitutes one of the real advances in cardiac therapy of the last five years. The official strophanthin, an amorphous body obtained from *strophanthus hispidus* or Kombé, is a reliable product, but it is not as active nor as constant in its composition as the crystalline strophanthin, recovered by the process of Thoms, from *strophanthus gratus*, sometimes called strophanthin-g or the crystalline strophanthin of Thoms, which is said to be identical with ouabin. Dr. Hatcher's⁴ observations indicated that 0.40 mg. of crystallized strophanthin equalled about 1 mg. of the official strophanthin, when given by the vein.

It is my belief, then, that with these three preparations, the tincture of digitalis, the infusion of digitalis and digitoxin, or, better yet, according to my experience, strophanthin, we can get all the results that digitalis therapy can offer, and gaining familiarity with these few, use them to better advantage than by experimenting with many.

Having chosen our weapons, the next care must be to know the temper of their steel. This can only be accurately determined by assay. I shall not go into this matter at length, but will call your attention to the fact that there are *two forms of assay*, the chemical and the biological. The chemical assay is made by determining the digitoxin content of the leaf, as the most active constituent of the drug, but we know that this is not the only glucoside in the leaf and that the proportions of digitoxin and the other glucosides are not constants, hence the assay lacks accuracy, though it has a certain value. The biological assay is much more satisfactory. It determines the activity of the leaf as a whole upon the animal heart.

Briefly, the drug is introduced into the circulation to the point of producing a systolic standstill of the heart. Most of the early work was done on the heart of the frog and many prefer this animal for assay to-day, but latterly the use of the cat's heart has been advocated, especially by Hatcher, and my feeling is that this method is gaining favor. For the technique of these methods the literature must be consulted, especially the bulletins from the U. S. Hygienic Laboratory of Worth Hale⁵ and others, and Dr. Hatcher's article in the *American Journal of Pharmacy* of August, 1910.

We who use the drug should insist that the pharmacist who dispenses shall have reliable data of the assay of the crude leaf, at least

in large centers, and in institutional work the preparations themselves should be assayed. How much the assay of a preparation from the same leaf may vary, depending on the niceties of technique, the excellent article of Rowntree and Macht in the *Journal A. M. A.* of March 18, 1916, shows. While we realize that assays of individual preparations are impracticable in our every-day work, nevertheless, the knowledge here set forth emphasizes the necessity of insistency on the use of good leaves of high assay and fresh preparations from such leaf, and this is pre-eminently practicable.

The second *fundamental principle* in digitalis therapy is *sufficiency of dosage*. You can't get effects from the drug unless you give enough to get effects, another aphorism that serves a purpose if it focuses attention. The text-book dosages are, with rare exceptions, grossly insufficient and defeat their own intent by their conservatism or rather timidity. The bugbear of digitalis poisoning has proved a Moloch to its victims. If we wish to banish pain we use enough morphine to get results; if we wish to quell a malarial paroxysm we use quinine until we get results, but in the use of digitalis we are guided by figures and restrained by fears and not at all by therapeutic results or evidences of the drug's operation.

I cannot commend to your consideration a better discussion of this subject than that of Dr. Cary Eggleston in his article, "Digitalis Dosage," appearing in the *Archives of Internal Medicine* in July, 1915, and radical as it may appear to many, to me, with the habits of digitalis administration I had long before established, it seemed conservative and safe. For those who want to know just how and just how much, and shirk initiative and responsibility and the progress that goes with it, he has worked out some very pretty rules for guidance.

Let us see *digitalis at work*. We will choose a very bad case of decompensation that shall make a large demand upon it, but we will select it from a definite group of cases representing a certain type of functional disturbance. This type of disturbance is characterized by a complete irregularity in its action, what the older clinicians aptly termed delirium cordis, what Mackenzie called nodal rhythm, basing the term on certain theories of his own as to the origin of the arrhythm, and what we now know as *auricular fibrillation*, a condition in which each muscle fibre of the auricle asserting its primitive prerogative of initiating a beat, a function which in the course of development it had delegated to a specialized bit of tissue, situated in the tenia terminalis near the junction of the appendix auriculæ and the superior vena cava, described by the English anatomists Keith and Flack and termed by them the sinoauricular node, or sometimes called the "pace-maker", acting all together result in a fibrillation of the chamber and utter

failure of its co-ordinate action or beat. Four to five hundred such impulses per minute pour down upon the ventricle, eliciting as many responses in that chamber as it is capable of, but totally deprived of rhythm.

This form of irregularity constitutes 50 per cent. of all arhythms but a much larger percentage of irregularities sufficiently striking to attract our attention. In young subjects it is almost invariably due to severe grades of mitral stenosis. It is the common form of irregularity in the myocarditis of advanced life. It is a condition in which the energy of the heart is wasted prodigally, for many of the ventricular beats are incited after a period of rest or diastole too brief to accumulate blood enough to reach the periphery or even to lift the aortic valves; hence, the beats heard over the cardiac area far outnumber those felt at the wrist, constituting a frank deficit of the pulse. There is a complete abandonment of economy. Not only does the heart suffer from loss of power, due to changes in its intrinsic structure, but also from fatigue chargeable to its useless work. Our suppositious case has undergone the usual consequence, insufficiency of the left heart has induced a dyspnoea, so severe that only the sitting position can be endured at all, orthopnea; the right heart has passed its burden over into the veins and passive congestion and oedema ensues, waterlogging the patient, filling subcutaneous tissues and serous sacks until the state of the patient is truly piteous; and finally, the ominous coarse bubbling rales in the chest bespeak a pulmonary oedema. These extremes of venous stasis are most commonly seen in the cases of mitral stenosis.

Now these are the cases in which digitalis achieved its reputation and an analysis of its *modus operandi* readily shows why. Now, the textbooks tell us that the effects of digitalis are slowly manifested, that it takes from thirty-six to forty-eight hours to get obvious results, and this is true if the traditional dosage is observed; but here is a condition described as too urgent for such dallying. The issue will be decided against the patient all too often before the intervals cited have passed. On my ward, in an adult case, we give at once into the vein, or, with a needle sufficiently long, into the muscle 3-4 to 1 mg. of strophanthin, and follow this in six hours, and continue at six-hour intervals, with one-half an ounce of the infusion of digitalis until satisfactory results are obtained.

Evidences of strophanthin action may be seen in a few minutes; relief may be felt by the patient in an hour or two. The particular strophanthin that I have used has been the amorphous strophanthin prepared by Boehringer and Son, and put up in sealed ampoules, one c. c. of which contains 1 mg. of strophanthin. The use of this stroph-

anthin has been determined only by convenience and by the absence of local irritation experienced in the use of some other amorphous strophanthins. Theoretically, the crystalline strophanthin of Thoms is to be preferred, because of its purity and greater potency. Dr. Hatcher's tables¹ give the relative strength of these strophanthins, as ouabin (crystalline strophanthin) of Thoms, 0.13, and strophanthin amorphous of Merck, 0.17, expressed in milligrams per cat unit.

I estimate that the dose of strophanthin advised above amounts to 7 1-2 to 10 grains of digitalis. When the case is less urgent, say, in the absence of pulmonary œdema, I begin with a large dose of digitalis, one ounce of the infusion or one dram of the tincture, and follow with one-half ounce of the infusion or one-half dram of the tincture every six hours until results are obtained. By such doses results are obtained by digitalis, even when given by the mouth, in eighteen hours or less.

Dr. Eggleston has published a rule for dosage easily workable by the general practitioner. Assuming that a leaf of high assay is used, averaging a cat unit strength of 100 mgs., and that a good tincture has been made from this, he has said "0.145 c. c. could be taken as the average therapeutic dose for each pound of the patient's body weight". "In this way," he says, "it is possible to give a third to half of the calculated therapeutic dose at a single administration, to follow this in from four to six hours with a quarter to a third of the total dose, and give the remainder in a few doses of smaller size at intervals of from four to six hours". In this way he looks for effects in twelve to thirty-six hours. This dose, reckoned for a man of 150 pounds, would amount to nearly 22 c. c. of the tincture, or 2.2 grams of the drug or 33 grains. The initial dose would be 10 to 15 grains.

As I write I have in my wards a young man with a pronounced mitral stenosis and in a condition of auricular fibrillation. On admission he was badly decompensated and very cyanotic. His heart rate was 95. At 4.15 P. M. he was given one dram of the tincture of digitalis, at 10.15 a half dram, at 4.15 A. M. another half dram and at 8 A. M. his heart rate was 72. At 10 A. M. he had another half dram and in the afternoon his pulse was 60. In sixteen hours from the first dose, on 12 grains of digitalis his heart rate had come down to a normal figure and he was lying back in bed in comfort. On a total of 18 grains in twenty-four hours his heart was slowed to 60 and later coupled.

This afternoon my house officer called my attention to an old man, a bad myocarditis case, who was brought into the ward in great respiratory distress, deeply cyanotic, the heart beat not sufficiently audible to count. He was given 1 mg. of strophanthin into the vein. At

2.40 the heart sounds were distinct and counted 96 to the minute. In thirty minutes the deep cyanosis visible across the ward had largely disappeared. These results are essentially dramatic, and, of course, convincing.

Now, how does the drug operate to induce this satisfactory state? Not by restoring the heart to its normal function. The auricle still fibrillates, and rarely, indeed, does a heart once fibrillating return to a normal rhythm. The fact that most impresses the practitioner is the marked slowing of this heart so lately wildly tempestuous. It is the peace of a calm after a gale. It is rest; and rest it is that has brought about this improvement. The heart is beating at 60 instead of 120 or 140, and each diastole is sufficiently long to fill the ventricle, so that every beat counts in forwarding the blood into the periphery and innumerable beats that could not feed even the coronaries of the overworked organ are eliminated. It is rest, the most efficient of all therapeutical measures, whenever the body at large or any of its component organs are functionally fatigued, that has been secured and has wrought this miracle.

You will recall the five functions of the heart, rhythmicity, the power to initiate and maintain the beat in rhythm; excitability, the power to initiate contraction under a stimulus from without; conductivity, the power to pass a stimulus from one site to another; contractility, that is, to beat; and tonicity, the power to contract continuously, that is, to preserve tone. Upon which of these functions has the drug operated to bring about its good results? It must be frankly acknowledged that we enter here upon the field of conjecture. We know that digitalis acts upon the vagus nerve to stimulate its function of inhibition and we know that the vagus function is still in operation during fibrillation, for atropine, paralyzing the vagus nerve endings, increases the number of beats in a fibrillating heart very materially. The right vagus nerve is distributed mainly to the right auricle and to the sinoauricular node or "pace-maker" there over which it exercises a regulatory function. This "pace-maker", however, has suffered usurpation of its chronotropic function in auricular fibrillation, but we know that in other conditions in which the pace-maker is ectopic, *i. e.*, in paroxysmal tachycardia and in auricular flutter, pressure upon the right vagus or other stimulation of the nerve results in obvious influence upon the abnormal state. The left vagus is distributed almost exclusively to the ventricle and the conducting bundle, and we know that stimulation of the left vagus results in depression of conduction through the bundle of His; so that one might conjecture that the beneficial results of digitalis in auricular fibrillation was due to stimulation of the vagus with a resultant lessening of excitability

in the auricle and lessened conductivity in the bundle, thus permitting fewer impulses to arrive at and excite the ventricle to contraction. At one time Cushny⁶ was convinced that this was the dominant, if not exclusive action of the drug in inducing the slowing. When, however, he studied the effects of atropine on these fibrillating hearts slowed by digitalis, he found that the release of the vagus did not restore the heart to the rate that followed this procedure before digitalis was administered, and, indeed, made so little difference in rate that he reversed his previous opinion and decided that vagus stimulation had nothing to do with the slowing, but that the whole effect was due to the action on the heart muscle.

In the case of the young man just cited, in whom the prompt effect of large doses of digitalis were demonstrated, the results of vagus relief by atropine were studied. Before the digitalis was given, the heart rate being 95, he was given atropine gr. 1-25 hypodermically. After a preliminary slowing to 80 in twelve minutes, it increased to a maximum of 148 in thirty-one minutes; that is, an increase of 53 beats when the vagus influence was removed. When fully under the digitalis, with a heart rate of 44, the same amount of atropine increased the heart rate to 90 in thirty-one minutes, that is, an increase of 46 beats, but it will be noted that 90 is less than the original beat (95) when the experiment was begun. To me this would mean that inhibitory effects were noted all through the experiment, but digitalis had added nothing to it, while the slowing had been due to the action of the drug direct upon the muscle. This was Cushny's idea.

But how was this effect upon the muscle wrought? On the bundle of His, quite certainly, because complete block can be, and often is, induced by the drug, that is not broken by release of the vagus through atropine. In other words, it depresses the function of conductivity. It has been conjectured, but as yet is a mere conjecture, that it lessens the irritability of the muscle substance, depresses the function of excitability. This may lessen the number of responses to stimuli coming across the bridge, as Cushny suggests. Such a slowing of the heart means more power to the ventricle as the result of rest, it means more efficient coronary circulation, better nutrition of the myocardium, hence, lessened irritability and improvement of normal functions. To no class of cardiac cases does the benefit of digitalis in the matter of affording rest accrue in the same measure as to auricular fibrillation. It is said that slowing occurs in 90 per cent. of these cases, against 30 per cent. in the case of regularly beating hearts. But in addition to the economy wrought in the heart's work by the drug, hearts in auricular fibrillation share

with hearts in other conditions the benefit exerted by the drug on the function of contractility, that is, on the strength of the individual beat and on the function of tonicity.

Nothing is borne in upon the practitioner more convincingly than that digitalis stimulates the heart to a more powerful contraction, for the evidences of decompensation melt away under its action even when the rate of the heart is not changed; but we have no instrument of precision that measures this for us, as the electro-cardiogram measures changes in conduction and evidences changes in irritability. It is this powerful effect on contractility that in a fatally toxic dose brings the ventricle to a standstill in systole. The drug probably increases the tone of the cardiac muscle, that is, the continuous contraction of the muscle, upon which the intermittent contraction or beat is superinduced.

Mackenzie at one time attributed the excellent results of digitalis in cardiac decompensation largely and predominatingly to increase in cardiac tonicity. The theory was an attractive one because, conceiving that in decompensation a loss of tonicity resulted in dilatation with material increase in the size of the ventricle, it was easy to understand how digitalis, increasing tonicity, decreased the calibre of the ventricle. Now as the surfaces of spheres increase as the squares of their radii and the contents as the cubes, one can see that any decrease in the calibre meant a decrease in intraventricular pressure in terms of squares and work, to express the contents, in terms of cubes. When, however, Mackenzie made a consistent study of cardiac outline before and after compensation had been established by the drug he frankly confessed that no appreciable shrinkage in the outline could be detected.

I myself am convinced, however, that in a certain small per cent. of cases of decompensation, such shrinkage in cardiac outline does follow the exhibition of the drug. I have in mind such a case in which decompensation followed "backing" in baskets two tons of coal up four flights of stairs. Here the dilatation might be called an acute one. Moreover, a loss of tone seriously affecting the optimum of cardiac work need not connote an appreciable dilatation. The *modus operandi* of digitalis on cardiac muscle has invited to much investigation. There can be no doubt that digitalis enters into some sort of combination with the cardiac muscle that it does not with other muscle tissue. What the substances are in the myocardium that possess an affinity for digitalis is not known, but Schliomensum⁷ calls attention to the phosphatids of heart muscle which he believes has a special capacity for combining with digitalis bodies.

Trendelenberg⁸ says that the mechanism by which a poison can

enter into combination with cell constituents is based on chemical ionization or molecular reaction or a combination of the two. In the case of ionizable salts like barium chloride the rapidity of action upon the heart runs parallel to the concentration, in the strongest solutions, acting instantly, but in the case of the glucosides with which we are dealing, regardless of the concentration, a time intervenes between the arrival of the substance at the heart muscle and its characteristic operation on it. This period of incubation or latency is demanded by the physico-chemical interchange between the glucoside and the lipoid substances of the cell membrane or the time taken for a pure chemical reaction between the glucosides and the lipoids analogous to the combinations of saponins and cholesterin. It would seem, then, as Grunwald⁹ puts it, that "the assumption that the digitalis action depends only upon the concentration of the poison cannot be held as correct. Much more must it follow that also the absolute amount of poison is of significance," "but," he adds, "that the rapidity of accumulation and therefore the beginning and course of the toxic action is dependent upon concentration is obvious". The amounts of strophanthin and digitalis bodies actually bound, however, is very different.

Comparing Straub's experiments on strophanthin with Grunwald's and Vikto-Weizsacker's¹⁰ on digitalin, it would seem that the heart could bind 300 to 500 times as much of the latter as the former, that the concentration of digitalin in the cell is twenty-five times stronger than in the menstruum; that is, the heaping up in the cell is twenty-five times stronger than in the case of "strophanthin". It would seem, furthermore, that a certain amount had to be bound before the characteristic action followed; that is, there had to be a definite concentration in the cell. Some authors are not convinced (Holste¹¹) that in the case of strophanthin there is an actual binding and certainly the evidences of its activity disappear quickly as compared with those of digitalis.

The electro-cardiogram, which has added so much to our own knowledge of cardiac phenomena, may give the earliest evidence of digitalis action by a modification of the T wave even before there is any demonstrable change in rate, rhythm or conduction. Furthermore, the persistence of this modification of the T wave may measure the length of time the drug still operates after its administration has ceased. Cohn, Fraser and Jamieson¹² found this to vary in the cases under observation from five to twenty-two days.

Hatcher,¹³ experimenting with animals, states that "the actions of the digitalins persist for periods of time which vary widely with the different members of the group, and with the species of animal em-

ployed", and that "the actions of digitoxin and digitalis persist longer than do those of the other digitalins in common use". He noted that "the cardiac actions of a very large intravenous dose of digitalis or digitoxin may persist for a full month in the cat", while in the same animal "the largest sublethal dose of digitalin, ouabin or strophanthus persists for a day, or at the most a few days. Disturbances of rhythm or conduction due to the drug, like others, I have observed persist for periods of two to three weeks.

The *evidences of cumulation* of digitalis are most important to the practitioner, for it is the signal to halt. These evidences are in terms of gastro-intestinal disturbances or the onset of irregularities in rhythm or delay in conduction. Of the gastro-intestinal disturbances nausea and vomiting are the well known expressions, diarrhea an unusual one.

Nausea and vomiting may be caused by the direct irritating effect of the digitalis preparations on the stomach, but far more commonly are due to the action of the drug on the vomiting center. The irritating effects on the gastric mucous membrane of digitalis, are, however, grossly exaggerated, and many patients are deprived of the much-needed drug because of this assumption or because of misinterpretation of the cause of the nausea and vomiting. These latter may be due to the very conditions the drug is designed to relieve, namely, passive congestion or to distaste, and I have found this obtain in some instances when the flavoring of the infusion, the cinnamon water, was objected to, which disappeared on its removal.

The action of the digestive ferments on digitalis bodies may play a role in inducing irritation. Holste¹⁴ has shown that they are all affected more or less quickly by the ferments and that the activity of the infusion is most readily destroyed. Gottlieb and Oswaga,¹⁵ experimenting on cats, determined that there were two causes for gastric disturbance in these animals after ingestion of digitalis preparations; first, local irritation, occurring within the first hour after a short period of salivation, at a time when almost the whole of the drug can be recovered unabsorbed from the stomach; second, centric action after absorption in six or seven hours, and after a long continued salivation. They concluded that the more quickly within the first three hours that vomiting occurs, so much the stronger is the local irritation of the preparation used in the stomach. The longer the preparation used tarries in the stomach, the more irritating it is likely to be, and that the powdered leaves and the infusion are prone to tarry. Worth Hale,¹⁶ too, from his experiments concludes that the "acid of the gastric secretion invariably causes some diminution in the action of the glucosides of the digitalis and strophanthus". He has suggested that

the drug should be given between meals and prescribed with alkalis. This procedure may well lessen the irritation of the drug.

Irritation of the stomach due to local action is believed to be common, and this belief has been responsible for a failure to administer it in the fear of provoking irritation and impairing the appetite or stopping it too soon, because of misinterpretation of the cause of the gastric discomfort. I am firmly convinced that it is not a common occurrence; there are some men who do not believe that it occurs at all. Hatcher and his assistant Eggleston,¹⁷ who have written much upon the subject, look upon vomiting due to local irritation as an exceptional and rare phenomenon. Eggleston¹⁸ has said, "There is neither valid experimental nor clinical evidence that the therapeutic doses of digitalis bodies cause nausea or vomiting through local irritant action on the alimentary tract". He would except only "certain rare instances in patients whose reflex vomiting mechanisms are hypersusceptible". I have seen this emetic effect induced immediately by a large dose ($\frac{3}{4}$ 1) of the infusion, that did not obtain later in half-ounce doses. What I wish to drive home is that the dread of nausea and vomiting from the irritation of the stomach is another bugbear, and that there is no sufficient reason for adopting one vaunted preparation after another to avoid this irritating effect.

The common cause, then, for nausea and vomiting is the centric effect. The drug has reached and stimulated the vomiting center. It is an evidence of cumulation and is an indication for stopping the drug. It is the only evidence of cumulation that I have seen that has been responsible for a fatal issue. Twice I have attributed death to the strain and dilatation in hearts subjected to the burden inflicted by severe and prolonged retching and vomiting. In both cases, to be sure, the hearts were very seriously damaged.

The different kinds of irregularities that may be induced by large doses of digitalis are numerous; the kinds that are usually induced are few. These irregularities and a slow pulse are indications for stopping the drug; cumulation has occurred.

A *slow pulse* is by no means constant in digitalis medication, but in the class of cases we now have under discussion, auricular fibrillation, it does take place in some 90 per cent., as has previously been stated. It is a good rule, as the pulse drops into the sixties, or, more correctly, as the heart-beats drop into the sixties, to stop the drug. Using the large doses I have advocated, this slowing often goes on after the drug is stopped to a figure considerably lower in the course of the next twenty-four to forty-eight hours, but need occasion no alarm.

Of the irregularities, *the coupled beat* is the most commonly seen

in auricular fibrillation; one might call it the characteristic irregularity of auricular fibrillation. This beating in pairs may be felt at the wrist, but often the second member of the couple does not send enough blood into the arterial system to be felt at the wrist or may not even lift the aortic valves; hence, the heart should always be auscultated, for a slow pulse of 30 at the wrist may be 30 couples or 60 at the apex. Mackenzie used to advise pushing the drug to the production of this phenomenon as an assurance of having gotten full digitalis effects, and while it seems to me unnecessary to take such a guide to our therapy, my experience agrees with what such advice connotes, that I have never seen harm come from it. This coupling is an expression of heightened irritability of the muscle substance by the digitalis, such that after every or after more or less of the regular beats a premature beat is initiated in one or the other ventricle. This coupling may last a week or more. The patients seem entirely unaware of the condition and it has seemed to me that they are rarely more comfortable than when it obtains.

Next to the coupled beats as an irregularity one sees auriculo-ventricular block, that is, at the bundle of His. Cohn has shown, as I have already mentioned, that an early expression of digitalis action is detected by the electro-cardiogram in a deformity of the T wave, and equally early by a prolongation of the P-R interval; that is, the drug operates at once to lessen conductivity. It would be natural to assume, then, that with a sufficiency of dosage *heart block* would occur, and this is what we see. In auricular fibrillation, as the P wave is absent, we have no guide to the approaching heart block, but when it is accomplished it becomes obvious by the fact that the irregular heart has now become regular and slow, that is, the ventricular beats no longer being initiated by the auricular impulses, the ventricle has taken up its own rate, which is slow, and its own rhythm, which is regular. It is said that this block has been seen to disappear under atropine, but I have not been able to affect such a result in my own cases.

As has been noted, there are a small number of fibrillators in whom digitalis does not induce a slowing of the pulse; this, however, does not necessarily mean that the beat derives no benefit from the drug, for the output of the heart may be improved in some measure when the rate is not modified, and this particularly obtains in those cases in whom the rate is not excessively rapid. It must be admitted, however, that occasionally a case is met with upon whom digitalis medication apparently makes no impression for his betterment. There are a group of fibrillators in whom the pulse is essentially slow, and it is a nice question to determine whether digitalis shall be

pushed in these cases or no. One can but try, hoping to get an improvement in contractility without aggravating the slowing. A case of the kind in my ward this winter gradually fell to a rate under thirty and forced me to discontinue the drug.

To recapitulate, auricular fibrillation, the old *delirium cordis*, the totally irregular heart, is the cardiac condition, *par excellence*, to treat with digitalis. Its response is largely due to the rest afforded by the slowing induced by the drug. Accumulation is evidenced by coupled beats or heart block, and by nausea and vomiting. Any of these conditions indicate interruption of medication until the condition disappears, but none should elicit concern.

Quite another group are those cases of cardiac disease in which the pulse is rhythmical, or, if irregular, associated with a dominant rhythm, whether the condition be one of valvular disease or myocarditis or other form of myocardiopathy (a useful term as connoting functional disturbance, and dodging the issue of structural pathology).

That the results of digitalis therapy are not so dramatic, nay, frankly not so satisfactory, as in the fibrillating hearts is true, but that the results are often as gratifying and usually welcome, even though the percentage of failures is greater, is also true. In the first place, slowing does not occur so characteristically, though I believe would occur more commonly if the dosage were adequate. Cushny¹⁹ says that only about 30 per cent. show slowing of the pulse—that is more than could be attributed to rest in bed—and in this number finds the slowing is due to vagus stimulation, in most cases, as it disappears under the use of the atropine. Explanations of this absence of vagus control have been numerous, if not entirely satisfactory, but I have no doubt that the loss of vagus control in old age, which furnishes no mean share of these cases, is in part responsible, but why the direct effect of the drug on the muscle should not obtain to slow the heart as in the fibrillating cases is a mystery. Cohn²⁰ has lately expressed an opinion that in hearts of a normal rhythm and in the absence of oedema, "to produce slowing is not a primary function of digitalis in therapeutic doses", that such slowing as does occur is "principally in the hypodynamic and unstable heart, in the heart which for unknown reasons undergoes spontaneous alterations in rate", in which hearts "a natural tendency to reduction is accentuated by administering digitalis". The beneficial results accruing to the use of digitalis in this group of cases must be attributed to the effect of the drug on contractility. We have no graphic representation nor other mode of measurement of the enhancement of this function, but the improvement in the heart sounds, and, better

yet, the disappearance of the evidences of venous stasis, dyspnoea, œdema, oliguria, are convincing enough.

Rarely, I have witnessed a diminution in cardiac outline that might have been taken as an expression of action on the function of tonicity, nor need such an action be assumed to be absent because there is no change in cardiac outline. Signs of cumulation in this group, as among the fibrillators, may be evidenced by nausea and vomiting, but the coupled beat, so characteristic in the fibrillating hearts, is a relatively rare occurrence, but one I have witnessed on several occasions. The form of arrhythm peculiar to this group is due to a lessened conductivity through the bundle of His.

As has been noted, recent electro-cardiographic work has shown two early effects of digitalis; a deformity of the T wave and a lengthening of the conduction time. These changes are detected even in normal hearts, and the delayed conduction is seen soon after the change in the T wave is evidenced, within forty-eight hours. It is this characteristic action on conduction that leads to block, partial or complete. As I have said before, the condition is not an alarming one, even if the block is complete. The patients may seem most comfortable, but it certainly is an indication for interrupting the medication.

Other forms of irregularity occur at times in cumulation. As might be expected from the nature of coupled beats, *extrasystoles* are fairly common. This one has to interpret as an increase of irritability of the muscle fibre under the drug. These extrasystoles are usually ventricular, but they may be at times auricular. As evidence of even greater irritability of the muscle by the drug we have rarely the onset of *auricular fibrillation*. The effect upon the inhibitory nerves is further shown by *sinus arrhythm* or even *sino-auricular block*. *Pulsus alternans* is another phenomenon sometimes witnessed and *nodal rhythm* may occur. Except for the blocking and the extrasystole, these irregularities mentioned are rather of curious than practical interest, and need elicit no fear either in anticipation or actual occurrence.

The text-books are full of *contra-indications*. They have stood in the way of much-needed assistance. I have often been asked to define the contra-indications for digitalis and have been able to do this by a very simple formula. "There are no contra-indications for digitalis except a compensated heart." This exception emphasizes that the presence of a murmur or an hypertrophy does not necessarily mean that the heart is weak or the circulation inefficient, but if the heart is weak and the circulation inefficient then there are no contra-indications. I recall as among these certain cases of *mitral stenosis*, in

which the use of the drug increased the irregularity. This dictum was laid down at a time when the nature of the irregularity of mitral stenosis was not understood and the coupling of cumulation probably looked upon as an unfavorable action of the drug. Auricular fibrillation of mitral stenosis we now know to be the chosen field of digitalis operation.

Digitalis was said to be contra-indicated in *aortic regurgitation*, because a slowing of the pulse favored a reflux of blood into the ventricle. The fact is, in aortic regurgitation the pulse is usually rapid, not readily slowed, actual regurgitation of blood but trivial in bad lesions and the aortic pressure transmitted to the ventricle during the passive stage of diastole even when that phase is prolonged, far more than compensated by the increased power of the beat and the improvement in cardiac tone. In fact, most excellent results follow the use of digitalis in cases of decompensation in aortic regurgitation.

Again, *advanced myocarditis* and *fatty heart* are said to contra-indicate the use of digitalis. Of this one can only say that it is a rare confidence in one's diagnostic ability that offsets the obvious pathology of function and its needs by the possible pathology of structure and its theoretical considerations. These theoretical considerations are that the muscle can at once be so strong as to raise the intraventricular pressure to a dangerous degree and at the same time be so weak as to suffer rupture from such an increase of pressure. Perhaps the rare happening of a cardiac aneurism, if determined, might justify a serious consideration of the advisability of its usage. In a word, myocardopathy, to use a term expressive of disturbance of function rather than of structural change, indicates digitalis.

Another set of contra-indications have been evolved for conditions in which high *arterial tension* plays a role, or in which an increase of pressure may threaten disaster, as in aneurysm. Digitalis is said to be contra-indicated in high arterial tension. Of course, the reason for such a warning is the notion that the high blood pressure will be aggravated by the drug, and the statements of pharmacologists foster the assumption, for they tell us (Cushny) that "in animals the blood pressure rises from contraction of the arterioles which are acted on directly by the glucosides". Then, too, the well-known fact that the volume output per unit of time is increased under digitalis jumps at the conclusion that this, too, will raise the blood pressure. It is of first importance to appreciate that the pathological human circulatory apparatus is not the same thing as the normal one of the experimental animal, and that results elicited in the one need not be anticipated in the other without modification. As a matter of fact, Cushny himself, as well as nearly all careful clinical observers, finds that digitalis

does not, as a rule, increase a high arterial tension, but more often lowers it.

Personally, I have come to look upon high blood pressure as a conservative effort on the part of the organism, a something designed to subserve a useful purpose, if we except perhaps the primary hypertensive cases, the hyperpiesia of Clifford Allbutt, which look to be arterial contractions due to the effects of some toxic substance on the vessel walls, and I have learned to look for that degree of blood pressure in each individual case at which the patient feels and looks the best, what I would call his optimum pressure, and I have observed again and again that if, under a brutal attack with dilators, I have succeeded in defeating nature's intent and have driven the blood pressure down, my patient is much the worse for it. I am speaking now of the day-in and the day-out hypertension, and not, of course, of the sudden exacerbations, the so-called hypertensive crises, which bespeak the advent of another factor, it may be uremic poison, it may be cardiac inadequacy or some other cause.

Now, so far as the increase of blood pressure is due to passive congestion at the base of the brain with consequent stimulation of the vasomotor center or passive congestion in organs which may send their cry of distress out to the vasomotor center, and improvement in cardiac output will relieve the condition, the stimulation of the vasomotor center ceases and the blood pressure falls. Cushny has attributed this absence of digitalis effect on man to a more perfect regulation of the vasomotor apparatus due to his upright position, so that any tendency of the drug one way or another to raise the blood pressure is quickly offset by a nice adaptability of the vasomotor mechanism. When through a failing heart the blood pressure is abnormally low, digitalis raises it; when with a failing heart it is abnormally high, it lowers it; so that it has seemed to me that the favorable effect of the drug has been to move the blood pressure in the direction of the norm, or of the optimum pressure.

One may say broadly, then, that there are no contra-indications for digitalis (barring a rare idiosyncrasy) when the heart is decompensated. There are, however, many cardiac disorders, sometimes distressing to the patient, sometimes unappreciated by the patient, that may or may not be associated with decompensation, which in themselves are resistant to digitalis or quite differently susceptible. Such, for example, are extrasystoles, tachycardias, auricular flutters, heart blocks, hearts in fever, angina pectoris, pulsus alternans.

I would speak, first, of one of the commonest forms of irregularity, the *extrasystole*, or, better, the premature systole, since it is rather a question of the sequence of the beats than an actual increase

in their number, the beat often spoken of by the layman and by the physician, too, as a "skipped beat", that form of irregularity so often seen among ourselves in middle life, when the strain of professional work and realization of our obligations to the next generation press upon us; so often seen in the tobacco heart, and finally an accompaniment of actual pathological change in the heart wall. As I have said, the extrasystole is an expression of an increased susceptibility or irritability of the muscle substance, that provokes it to initiate a beat before it receives the signal from the pace-maker, and can be induced by digitalis when large doses have produced this irritability. These extrasystoles are usually initiated in the ventricle and seem to be of less pathological significance than when originating in the auricle. Ventricular extrasystoles, even when very frequent, may be compatible with an efficient circulation.

I have at present under my care a public man, whose highly efficient activities are widely known, in whom by actual count the extrasystoles outnumber the regular, supraventricular beats, and yet he has suffered from no evidences of cardiac insufficiency. Now, so far as these extrasystoles may be provoked by an inadequate blood supply through the coronaries, so far they may be ameliorated by digitalis: that is, they are a part of a decompensation. When due to tobacco poisoning or occurring as the result of nervous fatigue, I question whether the drug has any value, though Edens²¹ says that in the latter cases digitalis sometimes makes them disappear. My feeling is that digitalis is not indicated, because it does no good, in premature systoles, unless these premature systoles be a part of a decompensation.

Paroxysmal tachycardia is another condition determined by an increased irritability of the cardiac muscle substance. When, instead of one beat starting at a point in the auricle, remote from the pace-maker, a series of such originate from such a point, we have a condition known as paroxysmal tachycardia, that is, a paroxysmal tachycardia is a series of auricular extrasystoles or an auricular extrasystole is a paroxysmal tachycardia of one beat. Attacks of tachycardia come on between beats as one might expect, considering that it is due to the transferal of the pace-maker from its normal site at the sino-auricular node elsewhere. These attacks may last a few seconds or go on for days. In long attacks the heart becomes exhausted and that particularly in badly damaged hearts. Its kinship to auricular extrasystole might argue for the futility of digitalis, and, indeed, the drug has gained no reputation in this condition. Much more efficacious is a physiological stimulus of the vagus, such as swallowing, deep breathing, vomiting, taking an enema, or stimulating it mechanically by putting it on the stretch, as by stretching the head back and by direct

pressure on the nerve as it courses in the carotid sheath along the anterior border of the sterno-cleido-mastoid muscle, at its middle, or indirectly by pressure on the eyeball. Cohn, from his observations on drugs, postulates the probable course of the vagi as follows: The right sends most of its fibres to the sino-auricular node and only a few to auricle and ventricle; the left sends most of its fibres to the bundle of His, some to the ventricle and a few to the auricle. Hence, pressure on the right vagus influences the heart rate and stops the tachycardia, pressure on the left induces some degree of block, but possible anomalous distribution makes it possible that left-sided pressure might rarely be efficacious in stopping the attack. Ordinary digitalis medication, as I have said, seems to have no appreciable effect to stop the paroxysm, but brutal attacks on the vagus, as we have seen, often do, and this may be simulated by the sudden and intense effects on the vagus of strophanthin administered intravenously as Edens notes.

A case I had the privilege of seeing with my colleague, Dr. Niles,²² and which he has reported, threatened exhaustion, but yielded to large doses of strophanthin into the muscle. Dr. Niles repeatedly interrupted attacks in this patient by 1 milligram of strophanthin into the muscle. The effect would usually be obtained within an hour.

Another clinical condition due to hyperirritability of the auricular muscle tissue is *auricular flutter*. Like paroxysmal tachycardia it is caused by the dislocation of the pace-maker to an abnormal site, *i. e.*, it is ectopic. In fact, it is a paroxysmal tachycardia of a higher rate, 180 to 360 to the minute, and usually associated with some degree of heart block. The impulses pass so rapidly to the bundle of His that that structure can not pass them all along to the ventricle. Two to one is the usual block, though three to one or four to one may obtain, or, as in one of my cases, a two to one block alternating with a three to one or even less regular rhythms. This type of tachycardia differs from the slower paroxysmal tachycardia in some important particulars. First, it may go on for many months without cardiac exhaustion, and this is probably due to the slower ventricular rate due to the block; the auricle does not seem to tire. Second, and this touches upon our subject, it is peculiarly amenable to digitalis therapy.

Lewis²³ and Ritchie²⁴ have each called attention to the curious sequence of events after digitalis. Full doses convert the flutter into a fibrillation and then when the drug is stopped the heart reverts to a perfectly normal rhythm. This occurs sufficiently often to be a characteristic. The heart may go into flutter again after a varying interval or may remain normal. The condition is especially to be found in the elderly, and though readily determined by the electro-cardiogram, not easily made out without it.

Auricular flutter, then, is a very rapid paroxysmal tachycardia, plus block, and peculiarly amenable to digitalis. Auricular flutter is closely akin to auricular fibrillation. One often catches the heart by the cardiogram in transition. In auricular fibrillation there is a still more marked degree of irritability of the auricular musculature with the result that innumerable fibres undertake to become the pace-maker and at once with a resultant inco-ordination that has already been described.

Heart block. This condition is due to the interruption of impulses from auricles to ventricles. The earliest suggestion of its advent is offered by delay in conduction, as shown by the prolongation of the A-C interval in a sphygmogram or P-R interval in an electrocardiogram. The heart is said to be partially blocked when a greater or lesser number of stimuli go through. The block is complete when none go through, and under these conditions the auricles and ventricles take up an independent rate and action. When this impairment of conduction comes on gradually, no disturbance of the circulation may be appreciated by the patient; when conditions obtain which determine a sudden accession of impaired conduction, occurring intermittently, then the experiment of the Stannius ligature about the auriculo-ventricular groove is duplicated and the auricle drops for a period, very slowly regaining its idio-ventricular rate. The result is cerebral anæmia, loss of consciousness, cyanosis and convulsive seizures known clinically as the Stokes-Adams syndrome. Heart block affords the one ground for a legitimate contention of my dictum that digitalis is indicated in all cases of cardiac decompensation.

Discussing complete heart block first, I believe digitalis should be used if the heart is decompensated, and I am so using it now in one of my cases. Mackenzie²⁵ states, in calling attention to the fact that the inhibitory effect on conduction can no longer take effect, now that the bundle is interrupted, that there was no evidence that the drug had an effect on the idio-ventricular rate. I am, however, still proceeding with caution in these cases. Among others who lean towards the view of Mackenzie are Janeway,²⁶ Cushny²⁷ and Edens.²¹

Not so easy to decide is our use of digitalis in partial block. That there is a likelihood that partial block may be converted into complete block cannot be denied. There is evidence, however, that it does not always occur. It seems to me that the presence or the absence of the Stokes-Adams syndrome would determine in some measure my procedure. With partial heart block and no history of Stokes-Adams, I should give tentative doses and even if partial heart block went over into complete block, providing symptoms were ameliorated, I should continue the administration. Simultaneous use of atropine is indi-

cated to eliminate vagus effect on conduction, but not too much must be anticipated from this. I have never had to use it on a case of Stokes-Adams nor can I find a discussion of its usage in these cases based on experiment. I must confess I should approach the problem with no little trepidation. It seems to me, however, that an established complete heart block in these cases is a less dangerous condition than a partial one, which invites to sudden exacerbations that give occasion to the syndrome.

Another irregularity occasionally met with, which need not detain us long, is *pulsus alternans*, a beat rhythmical in rate, but not in force, for every other beat is less forcible than the preceding and is taken to signify a weakened myocardium, and to have rather ominous significance. It is assumed that each weaker beat is the expression of the exhaustion of the ventricle resulting from the preceding stronger beat. This condition is known sometimes to occur as the result of digitalis medication and might be taken to contra-indicate its use in untreated cases in which it obtains. Indeed, able clinicians have observed negative results from digitalis medication in these cases. On the other hand, favorable response to the drug is sometimes seen. Bailey²⁸ has reported such cases and I have observed its prompt disappearance under strophanthin.

Angina pectoris is rather a symptom complex than a disease. Indeed, there seems to be no agreement as to the cause of the breast-pang. I shall not attempt to present the numerous explanations or theories, but will say that Allbutt's²⁹ argument for disease of the base of the aorta with implication of the nerve plexuses found there makes a strong appeal to me. The involvement of the coronaries in the fatal cases seems fairly constant, though that does not mean that the coronaries are involved in all cases that present the symptom complex.

There seems to be much hesitation about using digitalis in angina pectoris cases. Allbutt, in his recent work on angina pectoris, seems far from enthusiastic about it and freely expresses his fears. I do not know that the drug has ever been advocated to relieve the pain. The nitrites and morphine cover that field, but when the myocardium is insufficient, I cannot see why it should not be used. I am getting excellent results with digitalis in combination with nitrites at the present moment.

Janeway's²⁶ attitude towards digitalis in these cases seems to be the same as my own, but he makes the interesting statement that "when anginal attacks are followed by dilatation of the heart and myocardial insufficiency of the ordinary type, the attacks regularly disappear," and quotes Musser as saying, "that recovery from ventricular insufficiency under digitalis is frequently followed by recur-

rence of anginal pain." This suggests to Janeway that "alteration in tone of the ventricle has been the factor," a view others, I think, have shared with him.

Naturally, to those who believe that angina is due to spasm of the coronary arteries, the effect of digitalis on these structures is a matter of importance. Voegtlin and Macht³⁰ state that digitoxin and digitalin cause constriction of the coronaries, but that digitonin dilates them; hence they advise the use of digitonin-containing infusion or the combining of nitrites with other preparations to offset by their dilating action the constricting effects of the latter. Bond³¹ could demonstrate no effect at all on the coronaries by digitalis or strophanthin.

I will not quote further, but will simply state that opinions on this matter are so discrepant that at present an assumed action of digitalis on the coronary system should not modify our judgment as determined by other considerations. Of digitalis as a *diuretic* I will say only that I believe it to be such only so far as it improves the circulation, relieving venous stasis, hence, oedema, and relieving passive congestion of the kidney and the diminished renal function it entails.

My last word on digitalis therapy is to my mind not the least important. It is in answer to the question, "What does digitalis do in the circulatory failure of *acute infectious diseases*?" Here is a subject worthy of the hour and not the tag-end of it.

There is no agreement as to what is responsible for circulatory failure in these cases. Unless the heart has previously been affected autopsy shows a lesion of the myocardium adequate to explain the failure in very few instances. Of recent years, and especially through the teaching of Romberg and Passler, circulatory failure in acute infectious diseases has been attributed to vasomotor failure. Vasomotor stimulants, naturally, seemed indicated, but such vasomotor stimulants as we had were far from satisfactory when put to the test. Lately the work of Porter and Pratt³² and Porter and Newburg³³ has made the theory of vasomotor failure untenable, and it has been suggested that there may be an inadequacy of some center controlling distribution of blood on the venous side.

With so little knowledge of the mechanism at fault, the pharmacology of digitalis cannot, of course, be appealed to, and we have to fall back on empiricism to justify its usage at all. It has received no flattering commendations from the authorities until very recently. Mackenzie³⁴ gives no encouragement for its use in fevers, and I have always felt that his dicta have been interpreted as voicing prohibition or at least the uselessness of the procedure.

For the past two or three years I have been depending more and more on the digitalis group to meet the circulatory demands in acute

infectious diseases, my experience being largely with the pneumonias, until now I am using them almost exclusively. Justification of my convictions is now coming in experimental work, especially of Cohn and his associates. In the first place, they have demonstrated that the heart is digitalized in febrile cases, in pneumonia, as in the non-febrile, taking the delayed conductions and deformed T wave as evidence. Cohn³⁷ does not find that it slows the pulse in pneumonia unless auricular fibrillation occurs, when the rate is modified as in non-febrile cases. He says, "We are led to believe that there is no difference in principle between the way digitalis acts in fever and in non-febrile conditions". Jamieson,³⁸ working on animals with experimental pneumonia, found that "the presence of an acute infection in these animals [cats] does not interfere with the action of strophanthin on the heart", and Gunn³⁹ showed that "strophanthin acts more quickly on the isolated rabbit's heart as the temperature is raised", and that "the quicker rate of flow through the coronary vessels at higher temperature is probably sufficient to account for this". I have only convictions to offer you, not statistics, and the latter are of far less value than the former unless so large that chance variations cannot pervert the deductions. My convictions are decided, as are those of my associates, that the digitalis series is of great value in meeting the demands of a faltering circulation in acute infectious diseases.

In pneumonia, realizing the circulatory accidents incident upon the crisis, the sudden collapse or the cardiac dilatation, I prefer in any case that seems to me to promise a fairly severe course to anticipate trouble by beginning therapy early. Rapid digitalization of the heart is what we are aiming at. If I were to see a moderately severe case, we will say, on the third day, I would give the equivalent of nine to twelve grains of digitalis a day, as my judgment might dictate, to be continued up to the crisis, or until I felt that the circulation was well in the control of the drug. If I saw a case in which immediate assistance was imperative, I would administer three-fourths to one milligram of strophanthin into the vein and follow with doses of the infusion of digitalis, one-half ounce, or tincture, thirty minims, at once, and repeat at six-hour intervals.

I quote from the notes of my house staff as an illustration. The patient was a Russian, an iron worker, taken ill with pneumonia December 23rd.

"On December 29th, the patient was apparently in extremis and was practically given up by the staff. The day before, at 8 P. M., he had had minims 20 of tincture of digitalis and Pituitrin for his distension. During the night of the 28th, he was apparently unconscious, did not answer questions, had a rattle in his throat and by

morning had a full-fledged pulmonary oedema with a rapid thready pulse and a ghastly pallor. He received atropine, gr. $1/75$, and nitroglycerine, gr. $1/50$, every two hours without any apparent effect. Also received camphor and caffeine, gr. $=5$, every four hours, alternating.

"At 10.30 on the 29th, he received strophanthin, $1/2$ milligram, into his vein. At that time his clothes were saturated with a cold sweat and the pulse was very poor. At 4.30, Dr. Meara ordered a full milligram of strophanthin to be given intravenously. At this time the pulse was over 140 and very thready. At the end of an hour the pulse was 120 and entirely different in quality, being full and regular. This observation was carefully made and checked by several of the doctors and nurses. Pulmonary oedema seemed somewhat improved. At the end of the second hour his pulse was 108, oedema much improved.

"Dec. 30th, 1915. Condition today much improved. Oedema is cleared and pulse slowed to 100 with a drop in temperature. Patient is rational and is much better generally."

Patient recovered. Such prompt results as this just quoted are by no means unique in my experience.

Most authors state or imply that slowing of the pulse does not occur during fever as an expression of digitalis action, and, indeed, slowing is not necessary to the beneficial effects of the drug. However, through inadvertencies, slowing of a most convincing character has been provoked by members of the digitalis series.

I saw a case of pneumonia with a fellow practitioner, the day before the crisis. The temperature was 105.5° F. The patient had been given 3 milligrams strophanthin within twelve hours. The pulse was 70 and good quality. The pulse immediately after defervescence was in the forties and recovery was uneventful. I have seen two others in which such a slow pulse was induced with a regular rhythm and one in an auricular-fibrillation. Such slowing in the latter case is not uncommon.

Contributions to digitalis therapy are of daily occurrence. It is no small task to follow the literature, but all this bespeaks the importance of the subject.

If to any of my hearers my remarks shall have proven of the least assistance, I am amply repaid for my efforts.

400 West End Ave., New York City.

¹Hatcher. American Journal of Pharmacy, August, 1910, Vol. LXXXII, No. 8

²Hale. Hygienic Laboratory Bulletin, No. 74.

³Hatcher. Journal of the American Medical Association, Vol. LXV, No. 22, Nov. 27, 1915.

⁴Hatcher and Bailey. Journal of the American Medical Association, Jan. 2, 1909.

⁵Hygienic Laboratory Bulletin, No. 48.

⁶Cushny, Morris and Silberberg. "The Action of Digitalis in Therapeutics." Heart, Vol. IV, No. 1.

⁷Schlioménsum. "Ueber die Bindungsverhältnisse Zwischen Herzmuskel und Digitalis." Archiv für Experimentelle Pathologie und Pharmakologie, 73 Band, 5 u. 6 Heft.

⁸Trendelenberg. "Vergleichende Untersuchung über den Wirkungsmechanismus und die Wirkungsintensität Glykositischer Herzgifte." Archiv für Experimentelle Pathologie und Pharmakologie, Vol. LXI.

⁹Grünewald. "Zur Frage der Digitalis Speicherung im Herzen." Archiv für Experimentelle Pathologie und Pharmakologie, 68 Band, 3 Heft.

¹⁰Vikto-Weizäcker. "Ueber den Mechanismus der Bindung der Digitalisartig Wirkender Herzgifte." Archiv für Experimentelle Pathologie und Pharmakologie, 72 Band, 5 Heft.

¹¹Holste. "Ueber den Einfluss der Giftmenge und Giftkonzentration der Stoffe der Digitalisgruppe auf die Wirkung am Froschherzen." Archiv für Experimentelle Pathologie und Pharmakologie, 70 Band, 6 Heft.

¹²Cohn, Fraser and Jamieson. "The Influence of Digitalis on the T Wave of the Human Electro-cardiogram." Journal of Experimental Medicine, Vol. XXI, No. 6.

¹³Hatcher. "The Persistence of Action of the Digitalins." Cornell University Medical Bulletin, Vol. III, No. 3.

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On the Death of Dr. James H. Shannon of Saco.

The many friends and acquaintances of Dr. James H. Shannon, of Saco, were pained and shocked to hear of his sudden death at his home on outer Main Street, Thursday, Sept. 14th. He was in his usual good health and spirits up almost to the moment of his demise. He had been working about the grounds of his residence, using a garden hose to sprinkle the lawn and flower beds. Going into the house he sat down in a chair in the kitchen, where he was found unconscious by his wife, having suffered a paralytic shock. A physician was summoned, but Dr. Shannon did not recover consciousness and

died in a few minutes after the attack. His age was seventy-four years and nine months.

In the passing of Dr. Shannon the city loses one of its best known figures. He was daily seen on the streets, and his cheerful greeting was something to be remembered by everyone of his extensive acquaintance. Few there are in Saco who did not know and like Dr. Shannon. He was always cheerful and optimistic, bright and animated in manner and conversation, liberal in sentiments and a good citizen.

Dr. Shannon was born December 12, 1841, at Providence, R. I., the son of Charles T. and Jane (Stanwood) Shannon. He belonged to a family widely known in this section of Maine and passed a great part of his life in Saco. In 1861 he enlisted in the 5th Maine Infantry, one of the celebrated regiments of the service, and served in the Union army until the close of the war. He rose to the rank of captain and did staff duty in connection with some of the big battles in which his regiment fought, and where he did staff work. A part of the time he was in Tennessee, where he came in contact with, in the course of his staff duties, Andrew Johnson, at that time the governor of that state and afterward Vice-President and President of the United States, succeeding President Lincoln.

Some years after the war he took up the study of medicine, graduating in 1884 at Jefferson Medical College of Philadelphia. Immediately after finishing his medical school course he came to Saco, where he had made his residence ever since.

Dr. Shannon was always actively interested in everything pertaining to the Civil War and belonged to a number of military organizations, including Lee Post, G. A. R., of Camden, N. J., Sherman Regiment, U. V. U., of Saco, of which he had been colonel, and the Loyal Legion of Maine. He was well informed on war history and had written more or less on the subject. He was very interesting in his reminiscences in conversation.

Dr. Shannon was also very musical, being a skilled player on the organ and piano, and had also composed music. He had played in local churches many times.

He is survived by his wife, three sons and one daughter, Richard C., 2d, of Brockport, N. Y., Charles W., 2d, of Salem, Mass., James H., Jr., of Saco, and Mrs. Chester A. Roberts, of Saco; also by two brothers, Colonel Richard Cutts Shannon, of Brockport, N. Y., and Professor Charles W., of Saco, the well known church organist and music teacher.

The funeral was held at his home, 481 Main Street, Saturday afternoon, at 2 o'clock, and relatives and friends were invited to attend the services.

BULLETIN NO. 10

A Condition, Not a Theory

Doctor :

The cost of paper, ink and all the materials entering into the publication of this Journal has recently advanced from 50 to 100 per cent. How is the increased cost to be met?

Three Methods are Possible:

FIRST—*Decrease the number of reading pages.* We think this would be unwise.

SECOND—*Increase the per capita assessment.* This may become necessary, but we hope it can be avoided.

THIRD—*Increase our advertising income.* The present advertising rates are equitable. Hence any increased income must come from increased advertising patronage.

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FIRST—By patronizing our present advertisers, and letting them know it.

SECOND—By asking druggists and other firms you patronize to handle the goods we advertise.

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FOURTH—If there are supplies you want that are not advertised, please tell us about them, so we can show manufacturers that our pages are desirable mediums for their announcements.

A reasonable reciprocity is justifiable—this is *your* Journal. More revenue is needed to meet the increase in cost. **A real condition must be met.**

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YOUR EDITOR

Abstracts from Current Literature.

Acute Oedema of the Lungs.

Venesection affords the only chance for saving the patient. We may take a pint or more, and if the asphyxia is so intense that bleeding from a vein is hardly likely to succeed we must not hesitate to open an artery. Bleeding relieves the hypertension, and frees the lung and also the heart, enabling it to recover when threatened with failure under stress. Camphorated oil or sparteine injections are valuable as cardiotonic medication. Strychnia may be added later in medium dosage. So, too, digitaline has its value.

We are never to resort to nitrite of amyl or adrenalin. Colloid gol and intravenous or intramuscular injections may be used to combat the infection. So, too, we may resort to local counterirritation.

Appendicitis and Intestinal Parasites.

Le Monde Medical for June-July has an extended paper on this topic by Barnard and Vignard of Lyons, going into intimate details of the history of the actual discovery of intestinal parasites in many cases of appendicitis as discovered by the operation. Typho-appendicular pain in the McBurney point suggests the presence of worms in that region best supplied with blood for their nourishment. Recurrent attacks can be best explained by their presence, and vermifuge treatment has relieved many attacks of asserted appendicitis in which operation has been urged but refused. But even on the best of testimony the safest way to get rid of worms that may be the cause of appendicitis is to operate. The paper is suggestive, but in the end the operation is the only thing to do for the permanent safety of the patient in the vast majority of cases.

TYPHOID FROM OYSTERS.

P. B. Brooks, Norwich, N. Y. (*Journal A. M. A.*, May 6, 1916), reports an outbreak of typhoid fever, comprising fifty cases, which occurred last November and December in Binghamton, N. Y., and some outlying towns, which is of interest since the cause could be traced to oysters as the origin of the infection. There was no other common cause. All the cases occurred in those partaking of the oysters supplied from two out of six wholesale dealers. In one case it could not be exactly traced. The two wholesalers out of the six received their supply from three Maryland packing houses, each of which obtained its stock from a large number of scattered shuckers. No cases other than secondary ones have occurred since the exhaustion of the supply of infected oysters which were received in two shipments in November and December.

County News and Notes.

CUMBERLAND.

PORTLAND MEDICAL CLUB.

The sixth meeting of the year was held at the Columbia Hotel, September 14th, with seventeen members.

The resignation of Dr. John W. Bowers was read, and it was voted that he be made an honorary member.

Dr. M. C. Webber reported a case of childbirth with complete knot in the umbilical cord.

Dr. Fisher reported a case with symptoms which seemed to be ascribable to larkspur poisoning.

Dr. Warren reported the delivery of a monstrosity, a case of conjoined twins with two distinct bodies, two heads and two pairs of arms.

The paper of the evening, "Some Medical Aspects of Naval Recruiting," was read by Dr. J. H. Harris.

An interesting discussion followed.

H. M. SWIFT, *Sec.*

OXFORD.

OXFORD COUNTY MEDICAL SOCIETY.

The regular quarterly meeting was held at Farr's Hotel, Mechanic Falls, on Monday, Sept. 25th. The weather was ideal, the papers excellent, and the dinner good; in fact, everything smiled for us except our absent members.

The meeting was called to order at 10.45 A. M. by President Leslie, and Dr. J. H. Harris, U. S. Navy Recruiting Officer for the District of Portland, read an interesting paper entitled, "Some Medical Aspects of Naval Recruiting," which, together with the personality of the author, impressed upon us the importance of eliminating those diseases and habits which are reducing the efficiency of our young men. When less than one applicant out of five is found physically fit to serve in defence of his country, we must have a certain respect for those in the naval service, and also we would ask ourselves, who are the guardians of physical efficiency and are they doing all they can?

Dr. Roland B. Moore, of Portland, read a very practical and instructive paper entitled, "Some Problems in Infant Feeding." At this

season of the year the paper was immediately helpful to several members present, and the doctor was thoroughly cross-examined on many points.

Both papers were discussed by nearly all the members, which greatly added to the interest of the meeting.

The President appointed for Red Cross work in Oxford County, Dr. J. A. Nile, of Rumford; Dr. H. L. Bartlett, of Norway; Dr. H. R. Farris, of Oxford; Dr. F. E. Leslie, of Andover; Dr. D. M. Stewart, of South Paris.

The society expressed itself as favorable to holding a union meeting with Franklin and Androscoggin some time in October, and that it be an afternoon and evening meeting, with a banquet in the evening, at which the ladies be invited.

Those present were: Dr. Rankin, of Mechanic Falls; Dr. Stanwood, of Rumford; Dr. J. S. Sturtevant and Dr. J. M. Sturtevant, of Dixfield; Dr. Stimpson, of Waterford; Dr. Farris, of Oxford; Dr. Bartlett and Dr. Trufant, of Norway; Dr. Marshall, of Hebron; Dr. Leslie, of Andover; Dr. Stewart, of South Paris; Dr. J. H. Harris and Dr. Roland B. Moore, of Portland.

D. M. STEWART, *Secretary*.

Removal of Right Colon.

Charles H. Mayo, Rochester, Minn. (*Journal A. M. A.*, Sept. 9, 1916), says the indications for surgical treatment in megacolon, fistulas, tumors and obstruction are definite, and operations are successful within the limitations of the disease. Metchnikoff and Lane deserve great credit from the medical profession for the present advanced knowledge of the physiology of the colon. While various operations on the colon have been devised for the relief of many incurable diseases, it will probably be several years before operations for some of these diseases are on a satisfactory basis.

Progress in surgery of the colon has been rapid because the ground was not disputed by medical men, but was urged by them on the surgeon; other areas of the body have been disputed ground between the surgeon and the internist; hence progress has been slower but more sure. Operations on the colon are advisable for carefully selected patients with stasis who are toxic from their condition, from the drugs or from the absorption of unpassed fluid contents of the bowel resulting from stasis of three or four days' duration. For such

patients right-sided colectomy with preservation of the omentum is advised. It gives as good results as general colectomy and has less primary and secondary danger. The lymphatics of the colon are limited in comparison with those of the small intestine; consequently malignancy remains localized longer in the colon.

There is great variation in the length and size of the human intestine. The shortest, eight feet, is the carnivorous type; the longest, thirty-three feet, the herbivorous type. End-to-end union of the ileum to the colon is a safe procedure. The closed end of the large bowel, being incorporated into the wound and brought through the peritoneum, into but not through the muscle, may be opened to serve as a gas vent should the necessity arise. In the large majority of cases constipation is improved, but the best results follow operations of necessity for tumor and obstruction. There were 262 resections of the large intestine for malignancy. Of the patients who recovered and who were operated on more than five years ago, 54 per cent. are alive. Of those operated on more than three years ago, 67.5 per cent. are alive. From January, 1898, to December 31, 1915, the right half of the colon was resected for tumors, disease and stasis in 235 cases, with an operative mortality of 12.5 per cent. In the early work the operability was lower, the mortality lower and permanency of cure higher. This led to an increase in the operability of these otherwise hopeless cases with the result that there was an increase in the mortality and a decrease in the permanency of cure. The present operability is 62 per cent. Unless the operability percentage is given, statistics in regard to the results of operations for malignancy are misleading.

Physical Therapeutics in the College Curriculum.

E. L. Eggleston, Battle Creek, Mich. (*Journal A. M. A.*, Sept. 9, 1916), publishes an inquiry made by him as to the attention given to physical therapeutics in the medical college curriculum. The questionnaire method was used, and replies were received from fifty-seven schools, forty-two of which are listed in Class A, nine in class B, and five in Class C in the Association's classification. The replies indicated a decided interest in the subject and many express regret for their obvious deficiencies. He points out that in the model medical course prepared by the council on medical education, an allowance of sixteen hours in the third year was made for nonpharmaceutical therapeutics and in the fourth year fifteen hours were devoted to electrodiagnosis and therapeutics. No other definite time was allotted. In

summarizing the collected information Eggleston found that the average time devoted to the nonpharmaceutical subjects exclusive of psychotherapeutics was sixty-two hours, or about four times that recommended in the model curriculum. Very few schools were able to demonstrate the proper technic of the physical measures for lack of equipment. Where a personal opinion has been expressed, this lack of the necessary time has been given as an excuse for the deficiencies. Until within the past few years the subject of dietetics has not received attention in the medical curriculum as a specific subject, but fortunately things have bettered in this respect. Eggleston says that the day is past when the public was willing to be treated solely by medication. The patients expect not only a correct diagnosis but instruction as to what will do them good in every line, and it is high time, he thinks, that this should be provided for.

Half a Century's Progress.

October, 1916, points an epoch in the history of Parke, Davis & Co. The house was founded in 1866—just fifty years ago this month—largely upon the optimism of three or four determined men, backed by a capital that would seem insignificant today. There was nothing in its unpretentious origin to foretell the success of after-years. And by success we mean not merely material prosperity, but also that broader and more enduring success that is based upon good-will and confidence.

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The past half-century, as we have intimated, has been remarkable in its contributions to the newer materia medica. What will the next fifty years bring forward? Time alone can write the answer. Ours is a progressive age. The science of medicine has not reached its highest development. The physician's armamentarium will be further enlarged and fortified. New remedial agents will come into being. Many existing products will be improved. And with the fulfillment of these conditions, Parke, Davis & Co. (if we may judge the future by the past) are certain to be identified.

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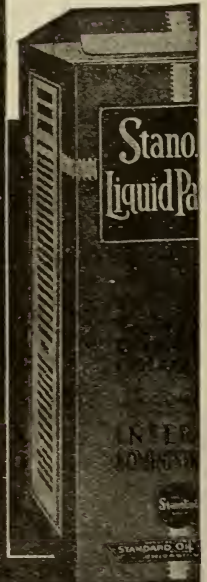
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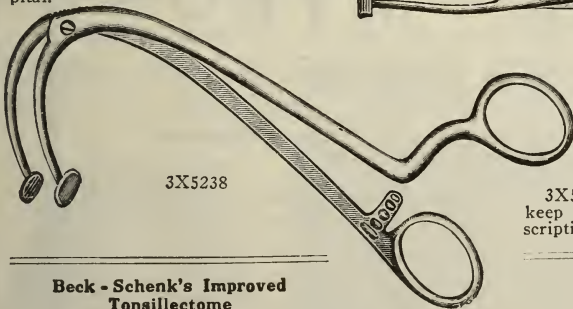
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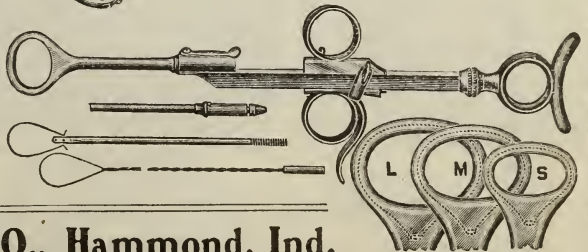
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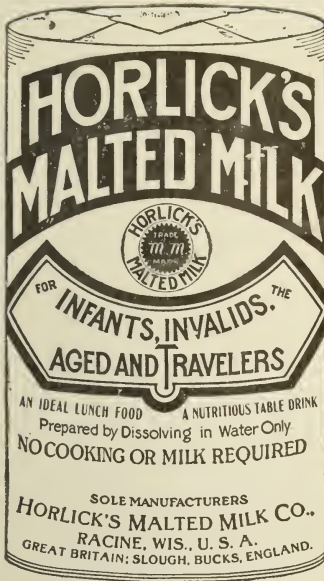
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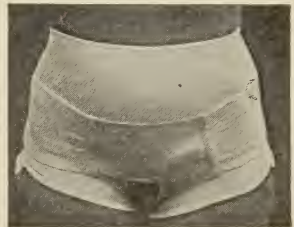


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Maine Medical Association meets at Portland, June, 1917

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NOVEMBER, 1916.

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TABLE OF CONTENTS

Original Articles—

The Relation of Ophthalmology to General Medicine.....	105
Our County Secretaries.....	121
Spasmodic Stricture of the Esophagus Cardio-Spasm.....	127
Bulletin No. 11.....	130

Miscellaneous—

Notices	131
County News and Notes.....	134
Personal News and Notes.....	VI

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The Next Meeting will be held at Portland, June, 1917.

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appears, the treatment of which he does not feel himself perfectly competent to conduct, and the specialist should call in the services of the general practitioner whenever he becomes aware of the fact that certain conditions of the special part to which he is devoting himself are related or dependent, in the special case, on abnormal conditions of the general system.

In presenting the above I do not wish to imply that the interdependence of general practitioner and specialist is not largely recognized, but if possible to emphasize the fact that such interdependence exists. In this presentation it is necessary to mention the various diseases of the eye that accompany and are due to general disease, and also to consider the effect of conditions of the eye on the system at large.

In order to facilitate the treatment of the subject, it may be well to group the various diseases.

INFECTIOUS DISEASES.

MEASLES. A mild binocular conjunctivitis, in the scant secretion from which the staphylococci and the streptococci are the micro-organisms, occurs in almost every case of measles, usually just preceding the rash. The lowered power of resistance of the system permits the invasion of other parts by these micro-organisms and hordeolum, blepharitis marginalis, dacryoadenitis, dacryocystitis and corneal ulceration may develop. An occasional case of subnormal accommodation and paresis of ocular muscles has been observed. Trantas¹ described an eruption affecting the center of the cornea, accompanying the skin eruption which he found in thirty-one out of forty-one cases examined. The spots disappeared in from three to six days. In treating these cases it is not necessary to keep the patient in a dark room. Subdued light, in addition to the local treatment, is all that is required.

CHICKEN POX. The eruption of chicken pox may appear on the conjunctiva and cornea. The vesicles rupture, a superficial ulcer forms, and healing takes place without leaving a trace.

EPIDEMIC CEREBROSPINAL MENINGITIS. Marked congestion of the conjunctiva, with profuse lachrymation and slight mucoid discharge, is often present during the first week of the disease. The affections of the eye in this disease, relatively infrequent, differ largely in different epidemics: stimulation of Muller's muscle, with Græfe and Dahrimple signs, conjunctival hemorrhage, nystagmus, congestion and blurring of margins of optic disc, optic neuritis, binocular. Secondary

¹ Annal d'oculist., August, 1903.

optic nerve atrophy, paralysis of the extrinsic ocular muscles and metastatic panophthalmitis occur in a very small percentage of the cases. Of 5,092 cases studied by Nieden,¹ 3.5 per cent. had some ocular lesion. A number of cases of edema of conjunctiva and lids due to venous congestion have been noticed. Abnormality of the pupils occurs.

INFLUENZA. The most common eye affection in influenza is conjunctivitis. A very mild congestion of the conjunctiva accompanies almost all cases of influenza, but an acute mucopurulent conjunctivitis, such as is at times produced primarily by the influenza bacillus, is not common as a complication of the general disease. Ulcer of the cornea with perforation panophthalmitis (Jackson); transient paralysis of various muscles, most commonly of the abducens; paresis of accommodation, usually bilateral; optic neuritis, which may be recovered from or may be followed by atrophy; retrobulbar neuritis with central scotoma, usually absolute, transient in the greater number of cases, may occur. Intense pain in the eyeballs, or apices of orbits and over frontal sinuses, lasting for from three to five days, is common. It is very probable that many of the paralyses and optic nerve affections accompanying influenza are due to extension of the inflammation from the frontal, ethmoid and sphenoid sinuses, and not to the presence of the influenza bacillus in the tissue of the nerves affected. The toxins produced by the bacilli may play a role. Many of the numerous affections of the eye that have been observed to accompany influenza² are evidently coincident and due to the presence of other micro-organisms.

MUMPS. The principal ocular disturbance associated with mumps that can be separated from other coincident infections is dacryoadenitis, a metastasis. This occurs in a small percentage of the cases, the number varying in different epidemics. The lachrymal gland suppurates only rarely. Edema of the lids of very marked degree may develop.

ERYSIPELAS. Eye affections from this cause are due to extension of erysipelas from the face. Abscess of the lid, with destruction of the skin of the lid, is not infrequent. Orbital cellulitis, thrombosis of orbital veins, abscess of the orbit may develop, accompanied by exophthalmos and ophthalmoplegia externa. Corneal anesthesia, corneal ulcer of all degrees of severity, iritis, uveitis, panophthalmitis, thrombosis of retinal veins, hemorrhagic retinitis, optic neuritis, followed by atrophy, and complete blindness may occur, on one or both

¹Klin. Monatsbl. f. Augenheilk., July, 1905, p. 74.

²Pflüger, Berl. Klin. Woch., 1890, No. 27.

sides, as a result of the invasion of the orbital tissues by the streptococcus erysipelatosus. Glaucoma has been observed as a complication, as has also inflammation of the lachrymal gland and sac.

CHOLERA. The eyeballs recede into the orbit, because of a diminution of the fluids of the orbital tissue. The cornea is prone to suffer from desiccation. Cyanosis of the lids and of the fundus oculi occurs to some degree in many cases. Subconjunctival hemorrhage occurs in the severe cases. The condition of the pupil during the algid stage decides the prognosis.¹ If the irides react to light the prognosis is favorable; if they do not react to light, the prognosis is unfavorable.

DIPHTHERIA. Conjunctivitis of a severe type and severe dacryocystitis occur rarely, particularly affecting young children. Optic neuritis, transient in nature, is an accompaniment of diphtheria in a small percentage of the cases. Vision is temporarily impaired. The later effects are the transient paralyses of the intrinsic and extrinsic muscles of the eyes. Total ophthalmoplegia, transient in nature, may develop. Treatment by subcutaneous injections of antitoxin is most efficient.

LEPROSY. All of the tissues of the eye suffer in leprosy: the atrophic or the tubercular manifestations on lids and conjunctiva; atrophic areas on the cornea; invasion of deep structures by the bacilli.

MALARIA. Keratitis, optic neuritis, retinal hemorrhages, retinochoroiditis, cataract developing rapidly in relatively young individuals has been reported. On the whole, the ocular symptoms accompanying malaria are rare.

RELAPSING FEVER. Uveitis of varying degrees of severity, followed in a small percentage of the cases by shrinking of the vitreous and atrophy of the globe, is described by Knies.² The uveitis begins after the third week of the fever. Its frequency differs largely in different epidemics. In some epidemics "nearly 90 per cent. of the cases are affected". Both eyes are involved in about 20 per cent. Recovery is the rule.

RHEUMATISM. (Rheumatic fever.) Recent research has apparently relegated this disease to the category of those produced by a specific micro-organism, the diplococcus rheumaticus. The eye affections that have been observed are acute conjunctivitis and acute iridocyclitis.

¹Corte, Deutsch. Med. Woch., January 22, 1891.

²The Eye in Relation to Disease, New York, 1895, p. 385.

SMALLPOX. Before the days of Jenner, 35 per cent. of the blindness in France was said to be due to smallpox. The lids are the site of the pustules in 20 or 30 per cent. of the cases. Some destruction of tissue may follow. The lids may become very edematous, preventing opening the eyes. Pustules may appear on the conjunctiva, also at the puncta lachrymalia, eventually closing these openings. Pustules may develop on the cornea, causing all degrees of destruction of corneal tissue. It is believed that the suppuration that follows the development of a pustule on the cornea is due to secondary infection and that it can be prevented by suitable asepsis. Subconjunctival hemorrhage may occur in hemorrhagic smallpox. Retinitis, glaucoma, parenchymatous keratitis and paralysis of the eye muscles have been observed. In the treatment of smallpox all pustules developing on the eyelids or eyeball should be kept smeared with sterile vaseline or borated sterile vaseline.

SCARLET FEVER. A mild conjunctivitis or conjunctival irritation with lachrymation often accompanies the eruptive stage of scarlatina.

TYPHOID FEVER. Conjunctivitis, keratitis, embolism of retinal arteries, optic neuritis, optic nerve atrophy, panophthalmitis, thrombosis of orbital veins, cataract and paresis of the ocular muscles have been observed as rare complications in typhoid. Since the typhoid bacillus is present in all the tissues of the body to a greater or less degree, it is not strange that manifestations in the eye, particularly those connected with the blood vessels of the eye, are not uncommon. Retinal hemorrhage occurs fairly frequently. Inflammation of the uveal tract is rare. In the later stages of the disease enophthalmus from wasting of orbital tissues, superficial and sometimes deep and extensive keratitis from inefficient closure of the lids, and diminished accommodative power are experienced.

PNEUMONIA. The cause of lobar pneumonia, the pneumococcus, may invade every tissue of the eye except the lens, and produce pathological changes. Thus acute conjunctivitis, usually affecting both eyes, sometimes occurs (prognosis good). Severe corneal ulcer (prognosis doubtful), metastatic uveitis (prognosis grave) and metastatic dacryoadenitis may occur.

PLAGUE. Eye complications are not infrequent. Maynard¹ observed the following complications in an epidemic at Patua: Corneal infiltration, 6; sloughing, 4; iritis, 12; scleral staphyloma, 2; lens, incipient cataract, 7; mature cataract, 5; retinal hemorrhage, 1. According to Calvert,² conjunctivitis is common. Keratitis, iridocyclitis and hypopyon occur. Panophthalmitis occurs rarely.

¹Brit. Med. Jour., September 14, 1901.

²Osler's System of Medicine, Vol. II, p. 770.

BERIBERI. Spasm and paralysis of the ocular muscles, atrophy of the optic nerve and neuritis have been observed in this affection. The amblyopia occasioned is recovered from in some of the cases.

WHOOPIING COUGH. Conjunctivitis is not uncommon in whooping cough, usually of the mucopurulent variety, not very severe. Subconjunctival hemorrhage occurs as a result of the paroxysms. Hemorrhage into the orbit may produce exophthalmos, ophthalmoplegia externa and ptosis. Optic neuritis leading to blindness has been observed.¹

DISEASES OF THE CIRCULATORY SYSTEM.

ANEMIA, SECONDARY, AND CHLOROSIS. If the anemia is pronounced the conjunctiva is of a pale pink color, sclera pearly white, the retinal vessels tortuous and paler than normal. Retinal hemorrhages may occur. In 246 cases of simple chlorosis systematically examined retinal hemorrhages occurred in three cases.

ANEMIA, PERNICIOUS. The principal affection of the eye in this disease is retinal hemorrhage. Of 238 American cases examined, retinal hemorrhage occurred in 84 (31 per cent.). A series of foreign cases, 326 cases, showed retinal hemorrhage in 236 (72 per cent.). The examination of the American cases was made but once, of the foreign repeatedly.²

LEUKEMIA, MYELOID. Of 66 cases examined retinal hemorrhage was found in seven (Cabot). Infiltration of the choroid with lymphocytes located about the optic disc has been observed by Stock. The development of lymphoid tumors in the orbit occurs.

LEUKEMIA, LYMPHOID. This form of leukemia is rarer than the former in occurrence. Retinal hemorrhage takes place in a higher percentage of the cases. Of nine cases examined retinal hemorrhages were found in eight.³

ENDOCARDITIS. This may cause embolus of the central artery of the retina by the detachment of small masses from the endocardium. Permanent blindness throughout the area supplied by the central artery results. Aortic regurgitation, because of the sudden drop in blood pressure after systole, may cause pulsation of retinal arteries. Increase of the action of the heart under these conditions may cause increase in intraocular tension by increase of the secretion of fluids into the eye. It may also produce retinal hemorrhage. This may also be caused by sudden overaction of the heart. Anasarca from

¹Gamble, Arch. of Ophth., July, 1903.

²Cabot, Osler's Medicine, Vol. IV, p. 626.

³Cabot, Osler's Medicine, Vol. IV, p. 666.

disease of the heart may show itself in the eyelids, particularly after the patient has been in the recumbent position for sometime, as after a night's rest.

CYANOSIS. Cyanosis, due to admixture of venous and arterial blood, principally by an open foramen ovale, shows itself in the eye by a cyanotic appearance of the lids, conjunctiva and fundus oculi.

PURPURA HEMORRHAGICA. Multiple hemorrhages in the optic nerve and retina have been noted, also atrophy of the optic nerve. Subconjunctival hemorrhages and subcutaneous hemorrhages in the eyelids are not infrequent.

DIETETIC DISEASES.

GOUT (uric acid of lithemic diathesis). Patcher¹ defines gout as "a nutritional disorder characterized by disturbances in nitrogen metabolism, with an excess of uric acid in the circulating blood". Deposits of the biurate of soda take place in various tissues of the body. The ocular symptoms that accompany gouty deposits are due to (a) gouty deposits in the walls of the blood vessels interfering with nutrition by obstruction to the flow of blood, or by the prevention of the escape of nutritive substances from the blood, or (b) to deposits of the biurate of soda in the tissues of the eye. Other conditions due to gout are dry eczema of the lids, tophi, keratitis with deposits of urates, scleritis, conjunctivitis, iritis, choroiditis, cyclitis and retinitis, macular exudative retinitis, often monocular, hemorrhagic retinitis, cataract, glaucoma, thrombosis of retinal arteries, etc.

RICKETS. The depression of the general nutrition that accompanies rickets influences the nutrition of the crystalline lens, producing the form of cataract known as zonular. Of 178 cases of zonular cataract reported by Schliep (Inang. Dissert Tübingen, 1902) 59 per cent. showed undoubted signs of rickets.

SCURVY. Subconjunctival hemorrhage and hemorrhage beneath the skin of the eyelids may occur early in scurvy, particularly in scurvy affecting infants; tortuosity of retinal vessels; hemorrhage into the retina. Hemorrhage into the orbits, with proptosis, occurred in 49 out of 379 cases.² Night blindness is not uncommon, apparently due to faulty nutrition to the retina. This disappears, as a rule, when the scurvy is recovered from.

DIABETES MELLITUS. The eye complications due to this disease are numerous: gangrene of the lids, xanthoma diabeticorum, cataract in 4 to 5 per cent. of the cases, retinitis, iritis, sometimes with hypopyon,

¹Osler, Vol. V, p. 808.

²R. Hutchinson, Osler, Vol. I, p. 904.

diabetic amblyopia, optic neuritis, cholesterol crystals in the vitreous body, intraocular lipema due to a substance in the blood allied to fat.¹ Koenig² examined 500 cases of diabetes in regard to eye complications and found cataract, 10; disturbances of accommodation, 20; gangrene of lids, 2; hemorrhagic glaucoma, 2; poli-encephalitis superior, 2; atrophy of optic nerve and retinitis, each 3.

Transient Myopia and Hypermetropia. These develop in diabetes. Myopia develops rapidly, reaching a maximum in from five to ten days. The change accompanies an increase in the amount of sugar in the urine and decreases when the sugar diminishes, or persists. The myopia is supposed to be due to an increase in the refraction of the lens, due to the presence of sugar in the fluids of the eye. This has apparently been substantiated by the direct examination of such a lens (Heine).

Hypermetropia. Horner was among the first to report a rapidly acquired hypermetropia in diabetes. Treatment of the diabetes reduced the hypermetropia by two diopters. Recently Jackson, Groenou, Lunggaard, and others have published similar cases. The hypermetropia develops within a few days, during an exacerbation of the diabetes, and subsides as the diabetes improves. Paresis of accommodation is an accompaniment. A number of theories are advanced to explain the phenomena: (*a*) the development of a latent hypermetropia with cycloplegia; (*b*) shortening of the antero-posterior axis of the globe from loss of fluid from the eye; (*c*) increase in the index of refraction of the vitreous. Transient astigmatism also develops in these cases.

Premature presbyopia, subnormal accommodation, is sometimes an early symptom of diabetes (De Schweinitz).

Ocular disturbances due to abnormalities of the ductless glands, and also those due to intestinal parasites and acute stomachic and intestinal poisoning, have been purposely omitted.

Because of the importance of the subject, the writer will allude briefly to the extensive influence that eye strain may have on the functions of the body. These disturbances are largely of the nervous system. However, they are not infrequently referred to as errors of digestion, faulty metabolism and circulatory disturbances.

In illustration of the first I may cite the following case: Female, Mrs. M., aged 37 years, height about 5 feet, 6 inches, weight 96 pounds, came to my office in October, 1899, with the history that for years she had suffered from indigestion. She could eat but little

¹Reis, Grfe's Arch., Vol. IV, p. 3.

²Soc. franc. d'ophth., exiii, p. 365.

without suffering; was quite emaciated; pain referable to the epigastrium usually; vomited frequently after meals. Had severe headaches quite often, which did not appear to bear any very definite relation to the use of the eyes. She had consulted many physicians. She came to me because it was difficult for her to see to sew and to read ordinary print readily. Examination disclosed a fairly high degree of compound hyperopic astigmatism. Glasses were prescribed and the patient was advised to wear them constantly during waking hours. Patient returned at the end of four months to report that her distressing symptoms had vanished within a few days after wearing the glasses. Her weight had increased by twenty-three pounds.

Patients come to me not infrequently complaining of occipital pains, which become more intense in the latter part of the day. The family physician is very apt to consider these pains to be due to faulty metabolism or to circulatory disturbances. These cases are so nearly uniformly due to eye strain that we are able to promise relief from the symptom on relief of the eye strain.

It not infrequently occurs that some forms of epilepsy and of facial spasms are held in abeyance by the perfect relief of eye strain. I have now under observation three individuals who have epileptiform seizures if they leave off their glasses for any length of time, or permit themselves to wear an imperfect correction of their errors of refraction and muscular imbalance.

THE PRESIDENT: I am sure the Association must feel itself highly favored at having the opportunity to listen to such an instructive and interesting paper. The discussion will be opened by Dr. Clough, of Bangor.

DR. H. T. CLOUGH: Mr. President and Members of the Maine Medical Association: In the first place, I want to thank Dr. Weeks for coming here and presenting us with this highly instructive paper, to which I am sure we have all listened with a great deal of pleasure and interest. I do not think there is very much to be added by specialists, and, as there are quite a number who want to say something, I will make my remarks quite brief. Perhaps I had better cite a few cases that illustrate the close connection between ophthalmology and general medicine. I think there has been quite a tendency of recent years to regard ophthalmology as an exclusive subject, to treat the eye as a separate part of the body, having no relation to the body at large, and therefore subject to diseases all by itself; in fact, I have known men high up in the art of ophthalmology to treat such diseases as iritis, for instance, by purely local measures. Of course, iritis will get well sometimes without any treatment; nature will take care of it. It will get well in other cases better if purely local remedies are used; but it will do better still, and the patient will have fewer complications, if general treatment is combined with local treatment. I fancy all of you have seen cases of iritis that have suffered all sorts of agony under local treatment only, that have become quiet immediately upon the administration of internal treatment, as the salicylates. It is not surprising, when we consider that we have within the small compass of the eye all the tissues of the body

represented, that a disease originating in a particular tissue elsewhere in the body will seek out that tissue, wherever it may be found. Therefore, we find in the eye diseases which originate in most remote parts.

I recall treating a case at one time of chronic conjunctivitis. The woman had been treated a great many years by a specialist for this very obstinate conjunctivitis. It was one of those cases of deposits forming, and these had been removed periodically for years, but no attention given to general condition. She presented on a general examination a profound gastro-intestinal disturbance. This was given attention, and relieved markedly in the course of a few weeks' time; and from that time on the conjunctivitis ceased to annoy her, so that she lived a great many years after that without any recurrences. I think similar cases could be cited by all.

Another very interesting case that I once saw—and probably the most of you have seen similar ones, though perhaps not as marked as this one—was that of a gentleman who came to me for failing vision. I looked into his eye and saw a beautiful picture of retinitis. I asked the gentleman if he had been as well as usual of late, and he said, "Yes, so far as I know I am perfectly well." I questioned him more closely, and I found he did have a few symptoms of nephritis, which he had not himself noticed. He said he felt a little tired; otherwise he felt as well as usual. This man lived only a few months after that, dying of chronic nephritis. The eye reported the first information that the body was fact disintegrating.

Dr. Weeks has referred to scurvy as affecting the eye. I would like to cite a case I once saw in a young child, a year and a half old, who had been fed on condensed milk exclusively. This child suddenly developed a very pronounced exophthalmos, and was taken to an oculist, who thought the child had a malignant disease, and advised immediate enucleation of the eye. The parents were horrified at that, and consulted another oculist, who thought possibly it might be a case of scurvy, and he advised waiting a while before enucleation. The child was placed on suitable treatment, and in a few days the same thing happened to the other eye; that, too, began to protrude. In the meantime, however, the first eye affected showed a little improvement. As the treatment was continued, both eyes went back to their normal position and the child had perfect vision.

I think those cases illustrate the necessity of looking further than the eye for a great many of the troubles which affect the eye. (Applause.)

DR. SPALDING: Mr. President: As the discussion of Dr. Weeks' paper is under way, I would like to say that for forty years or more I have been calling the attention of the doctors of Maine to the relation between the eye and the body. Not only once, but twice, have I read papers before this Association emphasizing this fact. I am sure we ought to be very thankful that so celebrated a man as our colleague has come all the way from New York to tell us additional facts in regard to this connection between the body and the eye. I believe that more attention should be paid to the connection between the eye and the body than has been done, and that the general practitioner should recognize it more fully. It is not necessary that one should have the use of an ophthalmoscope to discover a good many points in this connection. For instance, a patient has a disease of the ear and may not be able to open the eye. There may be a disease of the brain of some kind where the patient may have paralysis of an eye muscle. These things, and the external appearance of the eyelids, also the looks of the eye, whether turned in or out, or up or down,

and whether the pupil is enlarged or not, can easily be discovered by the general practitioner without any knowledge of the ophthalmoscope. I believe in the eye we can get more symptoms of general disease than from any other organ or part of the body.

It is not for me to enlarge too much upon what has already been said by our essayist and by Dr. Clough, but I will add that within a very short time I have seen the following curious instances:—

About two weeks ago a patient consulted me for vertigo, inability to read, and nausea. She was supposed to have Bright's Disease in an acute form, but on examination nothing of that kind was found; yet the case was in doubt. It did not take long, however, with a pair of colored glasses to find out that the whole cause of the trouble was a paralysis of an eye muscle. The patient, without knowing it, was seeing double. When she held her head in certain directions the double vision occurred and all these symptoms followed. This case will probably be cured by the use of electricity and by covering the eye that is affected.

Another similar case, showing the connection between the eye and the body, is that of a boy who had the mumps; and, although his eyesight prior to that had been absolutely perfect, yet directly afterwards he was affected with paralysis of the accommodation of the eye, and was obliged to use a glass fit for a person fifty or sixty years of age. With that, sight was perfect; without it, the patient could not read.

The most interesting series of cases that I have ever seen are from tonsillitis. A patient had tonsillitis on the right side, and during the attack the temperature went up to 104° or 105°, suggesting a localized meningitis. The sight of the right eye, on the same side as the tonsil, became affected. Optic neuritis and atrophy of the optic nerve followed, and the patient has lost the sight of the eye. Looking into that eye with the ophthalmoscope and discovering the optic atrophy is an everlasting monument, as long as that patient lives, of the connection between the body and the eye. I had a similar case in which tonsillitis of one side was followed by a partial loss of sight on the side of the inflamed tonsil. Six weeks later another attack of tonsillitis followed on the other side and the other eye was affected; so that the result of these two attacks of tonsillitis was that the vision of the patient was reduced to about one-third of the normal amount.

I will not take up your time by recounting cases to any further extent, as they are those which any oculist is likely to see at almost any time.

DR. E. E. HOLT. Mr. Chairman: I did not expect to speak on this subject, as I knew the time would be limited and no more than should be consumed by others, but I cannot let the opportunity go by to say that we are honored by having such a distinguished man to give us an address on the relations of ophthalmology to general medicine. I have been to meetings with Dr. Weeks for the last thirty odd years. When we have pathological questions under discussion we have depended upon men like him to solve them.

In discussing the subject of tuberculosis as affecting the eye and the use of tuberculin as a remedy in its treatment, I now recall how clearly he pointed out why favorable results would not be obtained unless the metabolism was efficient enough to enable the system to respond to such treatment, which is true of all remedies of this nature.

Dr. Weeks has given us a book on Ophthalmology which is referred to as

one of the standards of the world. He enjoys the distinction of an international reputation, especially in the discovery of the Koch-Weeks bacillus.

Of course in discussing Dr. Weeks' excellent paper in the few minutes at our disposal but little of one's experience can be recalled. I remember, however, forty years ago when I began to say to this Association that headaches could be cured by the wearing of properly fitted lenses, I could see smiles come over the faces of members across the room, indicating that they regarded it as the assertion of an enthusiast. Now, however, the pendulum has swung so far the other way that all oculists have patients referred to them by the general practitioner, with headaches, without that general practitioner even making an examination of such patients. There are but very few persons who have headache but something could be done for them by way of general treatment, and it is absurd for a general practitioner not to examine such persons and see what can be done for them by constitutional treatment. It is necessary at times to refer cases back to the general practitioner or to an internist for treatment.

We all recognize now that the wearing of properly fitted lenses is one of the most potent factors in the cure of headaches. The importance of this part of Dr. Weeks' subject warrants as much attention being given to it as all the rest of the subjects taken up, because, on an average, more than half of the time of all ophthalmologists is consumed in fitting lenses to correct errors of refraction which are the cause of a variety of disturbances of the nervous system, one of the most prominent of which is designated by headache. Headaches are caused by a disturbance of the vasomotor nerves. A similar disturbance of the vasomotor nerves takes place when one has a cold. If the cold effects the nasopharynx, the cause of it abridges the functions of the vasomotor nerves and the heart sends the blood to these parts in greater volume and force, so that the watery parts of the blood extravasate through the walls of the vessels and a discharge takes place from the nose and pharynx. Now if this process takes place within the cranial cavity, the extravasation causes pressure and a disturbance of the nervous system, known as headache. Of course we get headache from the introduction into the circulation of various germs and poisons, but whether these come from the digestive tract, the lungs, the skin or the genito-urinary organs, they upset the vasomotor regulation of the circulation and cause headaches. When headaches occur from eyestrain, the function of the vasomotor nerves is affected in a similar manner to that from any other cause. All these causes should be taken into account and not too much dependence be placed upon any one of them, lest we neglect our duty to our patients.

You will notice that in all the diseases Dr. Weeks has taken up in his comprehension paper, redness and inflammation of the conjunctiva is a common symptom to them all. A symptom that is common to so many diseases cannot be of much value unless it is interpreted by other conditions or further observations. We cannot consider all the conditions which might come from red or inflamed eyes, but we can refer to one of the most common and one of the most serious.

I think one of the ways for the general practitioner to get something out of this discussion is to consider just what he will do when he is called to treat red or inflamed eyes. He examines the functions of the eyes and of the body as far forth as is possible. He perhaps finds only a red or an inflamed eye. He may think it does not amount to much, and with an astringent or antiseptic collyrium it will soon get well. This may be true in some cases, but in others this red or inflamed eye may be the beginning of deeper and more serious inflammation of the eye. He, therefore, should not prescribe astringent or antiseptic col-

lyria, unless he can have his patient under control, that is, so he can see the case every two or three hours, or have some competent person capable of observing the functions of the iris and note changes that are likely to occur in the size of the pupil. If there is a tendency for the inflammation of the conjunctiva to go deeper and involve the iris, the astringent or antiseptic collyrium will not only favor this development, but in some instances they will cause it. Therefore, a practitioner who cannot have his patient under control should apply a mydriatic and see that the pupil becomes dilated. He then has his patient under control. If he cannot see the patient for the next twenty-four or forty-eight hours, it is his duty to apply atropine enough to dilate the pupil and direct that it be repeated often enough to keep the pupil dilated. Usually a weak solution of atropine (1/10 per cent.) is sufficient, but the action of the pupil should be the guide as to the strength of the solution of atropine and the frequency with which it should be used. The point is to get the pupil well dilated and keep it dilated. When this is done it will prevent adhesion of the iris to the lens, a thing that every practitioner should strive to prevent with all the resources at his command, for when once these are formed the eye becomes seriously damaged, if blindness does not supervene. This is something that every physician should put into actual practice in every case of red or inflamed eyes.

It has been said that three out of every four cases of iritis were caused by venereal diseases. This assertion emphasizes the importance of constitutional treatment. We, however, had a paper at the meeting of the American Ophthalmological Society in Washington this year, in which it was shown that almost the reverse obtained, and about two out of every four cases of iritis were due to infection from the teeth.

Of the examthematos diseases, my experience teaches me that measles affect the eyes more often than any of the other diseases of childhood.

Of the refractive errors developed in constitutional diseases, it has been my experience to note myopia much more frequently than any other form of ametropia.

Of the influence that eyestrain may have on the functions of the body, my experience teaches me that these are numerous and far-reaching, and I can fully concur in what Dr. Weeks has said upon this aspect of the subject.

DR. DONOVAN, Lewiston: Mr. Chairman, and Gentlemen of the Association: I wish to relate the history of a case. Several years ago I attended an obstetric case, and, when the child was born, I noticed that the eyes were very full and prominent. I called attention to it at the time. I did not see any more of that child until it was perhaps a year and a half or two years old. Then I found that the child had hazy corneas like the ground glass cornea, and small pupils. It was also noted that the child did not see well. I made a diagnosis of corneiritis, and advised the use of atropine to open the pupil to guard against fixation of the pupil during the process of the disease. The child did not do well. I noticed that it had marked tension of both eyeballs, and I called in an oculist, because I never was an oculist in the true sense. I made a diagnosis of syphilitic disease inherited from its parents. The oculist agreed with me, but he did not explain why the tension was so marked. After a time I advised that the child be taken to an oculist of the highest distinction, and I am happy to say that the child was taken to our honored guest, Dr. Weeks, of New York. He very soon dispelled the delusion under which I was laboring, and assured me it was a case of infantile glaucoma. The child then

was nearly blind. Perhaps Dr. Weeks might be good enough to give us something in regard to the case which he perhaps will remember. I frankly acknowledged my mistake to the father of the child, but I was not forgiven. The child is now in an asylum becoming educated as they educate those children. I say this because it seems right to acknowledge one's mistakes in such meetings as the present, which perhaps are not so often acknowledged as they should be.

DR. GILBERT: Mr. President, I do not feel as though I can add anything; I am here to learn. I appreciate the effort Dr. Weeks has made to be here, and we are deeply indebted to him. I do not feel as though I want to take any of your time now.

DR. KIERSHNER: Mr. Chairman: I certainly feel honored to hear Dr. Weeks' paper. I most heartily agree with the ideas expressed that we should work more in conjunction with the general practitioner, perhaps, and be his helpmate in a great many of these problems. While Dr. Weeks was reading his paper it struck me rather forcibly that the most difficult field is oftentimes the most productive of results. In diseased brain conditions, brain tumors, possibly, the most that any of us in this country see are a few. We may be conversant with the literature, but that is not wholly sufficient. It seems to me that in the one or two instances that have come under my observation, it has been mighty good for the two men to work together. I wish I could say something further of interest, but I agree with the others that I would like to hear from the general practitioners.

DR. A. W. HASKELL: Mr. President: I was not intending to discuss this paper for fear of going too much into detail. When I was a general practitioner, if anyone had read a paper on the things I have seen in my office, I should have put him down first, last, and always as a "four-flusher", because some of the results obtained by these symptoms described as eye-strain have been so marked, and with such results, as to seem to me almost miraculous. I have had a series of cases of women suffering from headaches, especially aggravated at the time of the menstrual period. I will only cite two, because they may be vouched for by a local surgeon. This local surgeon examined these two parties, and could find no reason for operation, and he referred them to me. They had headaches. They had been wearing glasses, but these headaches were aggravated at the times before or after the menstrual period. The most pleasant results for him and myself happened, because the headaches disappeared, especially at the time of the menstrual period. I have now in my records about fifteen cases that have been helped by the use of glasses. Last week I had a patient sent to me by another physician, who just wanted a certain opinion. This patient had been travelling around to different doctors, and had been for a great many years. During my examination I noticed he had an Argyll Robertson. I reported the same to the doctor who sent him to me, with the result that the doctor had no idea that the man had syphilis. He questioned him, the man denied it, yet the Wasserman test was plus 4.

Dr. Weeks in his paper reported cases of increased weight. That has been another one of my hobbies since I have been back here. One case reported to me a year afterwards had gained fourteen pounds and hadn't lost a day's work. Another case reported a gain of eight pounds in three months, and all symptoms relieved. Another young lady reported that inside of three months she had gained twenty-three pounds.

THE CHAIRMAN: If there is a general practitioner present, we would like to hear from him. Seriously, this is a subject that should interest the general practitioner. We would like to hear from the gentleman or gentlemen. I happen to see just at present the general practitioner from my county,—Dr. Bennett. Will you speak on this subject, please?

DR. BENNETT. Mr. Chairman: I have listened with a great deal of interest to the paper, and also to the discussion. I have had a good many years of service as a general practitioner, and can agree with the statements made here this afternoon. I think we must all realize that, in order to practice medicine successfully and intelligently, it is necessary to have co-operation between the general practitioner and the specialists. The general practitioner, indeed, should be a specialist in diagnosis. He usually renders first aid, and much depends upon that. He needs to know when his patients need more scientific treatment than he can render. On the other hand, the specialist—I do not include the six weeks' specialists—needs to know when the patient should be referred back to his regular medical attendant. By each attending to what he is most capable of treating, the patients will be best served.

THE CHAIRMAN: It would be worth while to hear from another. It is a subject that interests us all. Dr. Jackson, will you speak for Aroostook?

DR. FRANK H. JACKSON, Houlton: Mr. Chairman: The class of cases I have been thinking of during the reading of the paper, and one, in fact, that I have had quite some experience with, is the patient of the heavy, somewhat obese type, who comes to you with symptoms referred chiefly to his gastrointestinal tract. Of course the proper thing is to go over the patient as carefully as you can. You make your examination and find that excepting that the patient is having a few attacks of vomiting, is losing a little weight and may have occasional attacks of dyspnoea, with some headache, that there is little of a definite nature. You go over the urine and find nothing in the way of albumen, and you find no casts. If you have the opportunity of following up these patients, sooner or later they develop nephritis. I have had several cases of this type whom I have referred to various oculists and they have come back: "Nothing the matter." I would like to have Dr. Weeks if he will, give us the percentage of these cases that can be detected fairly early by ocular examination, because I think that if we take these patients, and instead of opening them up for gastric ulcers, chronic appendicitis and gallstones, we would do them far more good if we would put them on a general dietetic and hygienic treatment. Another thing: I would like Dr. Weeks to explain the reason for the exophthalmos in exophthalmic goitre, and the reason why, after performing thyroidectomy, with the relief of practically every other symptom, we get no relief from the exophthalmos.

THE CHAIRMAN: Will Dr. Weeks kindly answer?

DR. WEEKS: Mr. Chairman and Gentlemen: In regard to the first class of cases the doctor has mentioned, there are some important points I should want him to enlighten me about before saying much about what is possible from the standpoint of the ophthalmologist. One is the arterial tension, or the blood pressure, which is the other evidence of arterial disease. These cases that show nephritis a short time later almost always, in my experience, have vascular disease that is appreciable in other parts of the body as well, and the nephritis is

simply one manifestation. In such cases as that, if there is an affection of the cardiac vascular system, we are frequently able to see that the vessels are somewhat affected by looking into the eye. The vessels of the eye, as you know, are readily visible to us under the aphthamoscope, with the magnification of approximately from seven to nine diameters—I may say from six to eight diameters; and, if there is any disease, it becomes manifest. So, in a considerable proportion of those cases, we can certainly say that an affection of the vascular system exists.

In regard to the other question, of the exophthalmos in exophthalmic goitre, although not very well substantiated, it is thought by us that the exophthalmos is due to an increase in the vascularity of the ocular tissues, with dilatation more or less of the orbital veins as well as of the arteries. It is supposed, also, that there is some increase actually in orbital tissue. Then we have an apparent, if not a real exophthalmos, due in part to a spasm of the muscular tissue. The symptoms that you get are symptoms due to stimulation of the muscular tissue. Now treatment in these cases will bring about some slight reduction in some of the cases. I have two cases in mind where, by removal of the glands, we had a marked reduction in the exophthalmos; but it does not occur to any great extent in many of the cases, and I can not explain the reason, except that in all probability the changes that have taken place in the orbital tissue are more or less permanent.

THE CHAIRMAN: If there is nothing further, we will call for the paper which was to have been given earlier by Dr. Webster.

DR. WEEKS: Mr. Chairman, I did not know that this was to be the closing of the discussion. I do not want to sit down without expressing my thanks to the gentlemen here for the very kind reception that I have received, and particularly to those who have taken part in the discussion for the kind manner in which they have received my communication. While listening to this discussion, it has occurred to me that a paper on the relation of the general practitioner to ophthalmology would probably bring out more than a paper on the relation of ophthalmology to general medicine, and I think that would be a very suitable theme for an essayist to address such an assemblage on. I want to compliment the gentleman who spoke of the error in diagnosis in relation to the child on his temerity in being so frank in such an assemblage. The case was one of the relatively rare cases that we meet with of infantile glaucoma; and the use of anything that will increase the tension of the eyeballs is, of course, somewhat detrimental. I do not think, however, any great damage was done in this case by the use of atropine in its early stage. Such cases are too rare to get any satisfactory result by treatment. However, some of the cases we do treat with a great deal of satisfaction. I have in mind the case of a girl, fourteen years of age, I think, who came to me from California with exophthalmos in both eyes. By making a trephine operation the vision has been somewhat improved, and will probably last her throughout her life. But many cases are hopeless from the start, and I do not think the doctor need reproach himself with having done the patient any harm, as in all probability he has not. (Applause)

On motion by Dr. Jackson, a rising vote of thanks was extended to Dr. Weeks for his paper.

*OUR COUNTY SECRETARIES.

By DR. JAMES A. SPALDING, Portland.

Various members of this Association have, of late, complained to me, as one of the editors of the Journal, of the defective reports of county medical meetings handed in for publication by the Secretaries. These members did not mince words, but bluntly inquired, "Why is such stuff printed? I never take the trouble to read them". Knowing how easy it is to find fault, and how often fault is found concerning unimportant details, I replied that it might be supposed a part of my duties to read every word of material handed in for publication, but that such was rarely the case. "It is oftener the case that I see nothing at all of many issues," I replied, "than that I see all that is handed in. But now that I hear that fault is found concerning these reports, I will look into the matter and speak concerning it later on."

It is now my intention to consider this fault-finding, to express an opinion concerning it, and to show more plainly to most of the members than they seem to comprehend the difficulties appertaining to the office of a County Secretary. In conclusion, I shall offer some suggestions for the encouragement of the many capable men at this time officiating in this position in the various counties.

I have studied most of the reports printed of late, and the apparent faults are an excessive brevity, too lengthy lists of members present, insufficient mention of meritorious work performed by essayists and disputants, and too much stress, comparatively, laid on the social side of the meetings. Into some of these faults let me enter, and discuss them briefly, yet sufficiently to define them.

Passing by the excessive brevity, for that will be retrieved by amending other asserted faults, the first objection lies in the handing in of long lists of members present. Of what possible use can it be to print mere names? I should say that in case of the smaller counties, these might be printed for attendance at every meeting, for it emphasizes the names of those who encourage the officers of the society by their presence. In the case, however, of the larger counties, such as Cumberland, Kennebec or Penobscot, the printing of such lists is expensive and generally useless, as no one will read them. It is my firm opinion, nevertheless, that for the annual meeting, at least, a list for every county should be printed, because, sooner or later, the career of some member will become of historical value, and the investigator will find useful material in what seems to us a mere list of names. For example, the presence or absence of certain members at

*A paper read before the Maine Medical Association, June, 1916.

meetings will be noted historically with a curious eye. Once a year, at all events, an alphabetical list of the members who have attended the annual meeting, or at least others of the meetings during the year, should be printed, for the reason mentioned.

From this same point of view, it might be urged that although few men care to waste time, as some call it, in hunting out the lives of deceased physicians, yet such searchers will come along, and from their standpoint it may be said that with some little effort on the part of County Secretaries their reports can be made of additional historical value by paying more attention to the personal side of the meetings. By this I refer to what the various members, including the essayist, said. To this particular point reference shall next be made.

Many reports say that a very valuable and instructive paper was read on dyspepsia by a certain physician, and ably discussed by the members, or that a long and general discussion followed the reading of the paper, or again, that owing to the absence of the essayist, the meeting was profitably spent in the presentation and discussion of cases reported by members present. I ask you, now, if such reports tend to the advancement of the profession? I urge that they are wholly defective, because we learn nothing of the points of view from which the writer considered his subject, though it might have been done in a few words. As for those who discussed the paper, we ask in vain if they agreed with the views presented, or did they object to them partly or in full? From what points of view did they criticise? Did they offer views of value? If so, what were they? It certainly seems to me that it would not be difficult to enlighten the readers of a report were it to read something like this:

A stated meeting of the county society was held at ——— on such a date, the number present being ——— (and a list of those present once a year should be appended alphabetically). The business carried on was so and so, the report of the censors amounted to this and that, and the following new members were elected. The Society then listened to a paper on pneumonia, for example, in which the writer, Dr. ———, went into the pathology of the disease, which he fully described, and then the etiology, which he considered as due to infection invariably, and in conclusion he described in detail the treatment which had given the best results in his practice (and this treatment should be named in full in the report). The paper was discussed by Dr. ———, who treated his cases with such a remedy (the dosage and frequency to be mentioned), Dr. ——— suggested a more plausible causation (to be described), and by Dr. ———, who was enthusiastic over the very favorable results which he had obtained in several cases by a new method (to be described in a few lines of

type). If cases were reported they should be defined, and if after-banquet speakers brought out any points of medical value they should be made alive by words.

Another argument in favor of detailing the essay and the discussion briefly is that it gives credit to those who help out the meetings toward success, and gives the Secretary an opportunity to increase the medical value of his report.

It is always painful to me to see in a medical journal a paper entitled "An Interesting Case" or "Clinical Cases", because the reader has to waste his time trying to find out what those cases were. If they were properly labeled, the reader could see at a glance whether they were worth looking into at all. In the same way, all cases reported by a County Secretary should be plainly defined. "A Bullet in the Orbit, with Preservation of Sight", is plain. "An Interesting Case", covering that very same bullet wound, gives no clue to the extraordinary injury, and more extraordinary salvation of sight.

These brief suggestions may perhaps show how Secretaries can inform physicians of actual proceedings of meetings, and at the same time turn down the fault-finders.

Most reports pay too much attention to the social side of the meetings. It is easy to have a good time, but hard to get a successful meeting. We meet for medical improvement. We need not indulge in mock heroics and try to impress upon the world that we have higher purposes than men in other professions, yet it is true that the man who keeps up to the times does the most good to his people. We have to keep posted in medicine in order even to make a living. From that vital point of view it must be insisted upon that the county meetings are worth attending for such a purpose. Afterwards comes the social side. Willing as we are to praise the bounteous table, it is to be hoped that not too much shall be said on that score to the minimizing of the medical part of the meetings and the after-dinner speaking. It is true enough that few physicians sparkle after meals. Yet it is hard on some speakers that no clue is ever given of the trend of their remarks. Stories and anecdotes cannot always be told in black and white, but the substance of many an after-dinner speech at medical meetings might be preserved as part of a Personal Medical History.

Having passed rapidly over some faults observed in the reports in question, let us now earnestly emphasize the difficulties of the County Secretary.

I ask you, first of all, if you are in the least familiar with what the duties are? Have you ever offered to help one in his work? Have you done your share as a member of the Society, so that you have a

right to find fault with his share as neglected? Have you ever offered a paper for a meeting? Have you ever studied your case book to see if some of it might not be of value to a program? Have you ever looked at a program of a meeting with the intention of giving the Secretary a chance to broaden his report by offering your opinion of a paper? Have you ever thought of suggesting to the Secretary the benefit of inviting some leading physician to read a paper before the Society? Did you ever try to make a program? Did you ever find fault because men from away were invited to read whilst local men were neglected? Did you ever think that papers are difficult to write and that local men are busy with their practice?

Why, we ask, do physicians take a vacation? For a change of scenes and faces, of course! In the same way a man from away is more likely to give us a change of opinion than the man who lives amongst us and who sees the same types of disease that all the rest of us are daily seeing and treating. So, too, the man from a metropolis brings us the fruits of an extended hospital practice and more breadth of thought than the man from the small centers. Then, again, most of us are familiar with what the local man has to say, and the attendance on meetings where the paper comes from one whom we know so well is likely to be less than when the novelty of a man from away is expected. So, too, as the local writer does his best to furnish a desirable paper, the man from away has his incitement to prove by his paper that his invitation was justified. Local talent should have its chance, but a vacation, in favor of others from a distance, is justifiable from the point of view of a capable Secretary.

It must not be forgotten, in making a program, that most physicians cannot be expected to write but a few papers during their years of busy practice. Many physicians in Maine are bold operators, skilled diagnosticians and capable therapists, but they do not enjoy the uninterrupted time to put their experience into a paper. If they patched up their thoughts they could write something disconnected, but unsatisfactory to themselves or their hearers. You have got to get away from everything, you have got to neglect your practice if you expect to present a well balanced paper, with introduction, substance and conclusions. Such a sacrifice should not be demanded too often from busy physicians.

How many of us (to continue the duties of a Secretary), ever think of the labor involved in notifying members of a meeting, or in naming a day that shall not conflict with other meetings of a social, political, or medical nature? Beyond all this clerical work, the Secretary is bound to be present at every meeting, yet what encouragement to him is it to find occasionally a mere handful of members

present; that even the essayist is not on hand, and that the only thing left is to make an impromptu affair of what, with a good program, ought to have been a spirited meeting!

If, now, most of us have no ready answer to any of these questions, the list of which might be greatly lengthened, let me read the duties of the Secretary as defined in the County Constitution:

"He shall record the minutes of the meetings and receive and take care of all records and papers belonging to the Society, including its charter. He shall notify each member of the Society of the place of meeting, and, whenever possible, give the program of the meeting. He shall keep an account, and promptly turn over to the Treasurer all the funds of the Society which may come into his hands. He shall make and keep a list of the members of the Society in good standing, noting of each his correct address, place and date of graduation, and date of the certificate entitling him to practice medicine in this State, and in a separate list he shall note the same facts in regard to each legally qualified physician in the county not a member of the Society. He shall also send a copy of these lists to the Secretary of the State Association, at such times as may be designated by it. In making out such lists, he shall endeavor to account for each physician who has moved into or out of the county during the year, stating both his present and past address. At the same time he shall transmit to the State Association, his order on the Treasurer for the annual dues of the Society."

As if this were not enough, the Secretary is on the Committee of Progress and Scientific Work, and as such "it is his duty to promote the scientific and social functions of the Society by arranging attractive programs for each meeting, and by urging members to take part in the scientific work. He shall stimulate fraternalism and good feeling amongst the members and shall make provision for dinners and luncheons, as affording an excellent way of bringing members together, and to make them as inexpensive as possible" (lest fault-finding follows).

It is not, however, the cost, nor the food, nor the occasional beer, that produces so much trouble in certain counties as it is the time at which the repast shall be served. Some members want the banquet at their usual supper hour, so as to enjoy it with their habitual appetite. Others do not want it then, as it interferes with their evening office hours. They want it after their office hours. Others do not want it at that time, because they have then lost their habitual appetite. They prefer the paper first, and to get another appetite later on. Finally, there are many who feel that after an evening spent in listening to papers and discussions, there is no pleasure to be

compared with sitting at a cosy table with medical comrades, and over a light repast, a cigarette, and a glass of beer, renewing friendships or talking over medical occurrences.

Let me suggest at this point, that some of those who find fault with secretarial reports might follow the worthy example of a former member of our Association, who, when papers were scarce and their themes worn threadbare, offered a prize for the best paper of the year. Will, now, any member offer a prize for the best secretarial report appearing in the Journal during the coming year?

In conclusion, the position of a County Secretary is a hard one. It takes a smart man to fill it, for in many ways he is the boss. The President is a new man, unfamiliar with his duties. He looks for help from the Secretary and is thankful if this man is hardened to the business, so that he need not have to depend on a new Secretary. Being, generally, a younger practitioner than the President, he is well in touch with men in the State and out of it, who can furnish papers for the meetings. He has to be a man of tact and not to interfere with the duties of the other officers. He has to provide the entertainments, to see that the fare is good, the cigars not bad, the tips not too large, and to look out for the transportation and exhibition of hospitality to the guests. Finally, he has to endure the criticism of those who find fault instead of coming forward with encouraging remarks and hints for improvements where really needed.

We should encourage our Secretaries in every possible way—encourage him with a good attendance; sacrifice everything but very urgent patients to be on hand; offer a paper once in two or three years, and do not forget your own self-interest in making such an offer, for it will spur you on to have it in readiness and proper shape at a promised date even if that is a year head. Look over your case books, and weld a dozen cases into readable shape. Offer to open the discussion whenever you see an attractive paper on the program, promise faithfully to do so when asked, and help out your offer, and your promise, by being ready to hand in, immediately after speaking, an abstract of your remarks. In these and other ways you will facilitate and advance the production of satisfactory reports from the Secretary for printing in the Journal of the Association. Do not forget, either, to inform the Secretary that you will probably not attend a banquet, for then the Secretary, knowing that you and others are not likely to be on hand, can save money for another occasion of medical cheerfulness.

A capable County Secretary is a man hard to find, and when you find one and I mention in their ranks every present Secretary in Maine, hold on to him, keep him in office as long as you can, encour-

age him in the ways suggested and others which will occur to all thoughtful physicians. Above all, cease to find fault with him, for as a human creature his job is a hard one to do well from any point of view, and the hardest of all his tasks is to please everybody. The man who stands still goes backward, and the County Society which is a standing focus of bickering and fault-finding with its Secretary, or other members, is more likely to degenerate than to advance in medicine and its branches.

SPASMODIC STRICTURE OF THE ESOPHAGUS. CARDIO-SPASM.

By RICHARD F. CHASE, M. D., Portland, Me.

December 8, 1915, Mr. S., age 51, deputy sheriff. Until the present trouble, the patient has had no illness for many years, and his past history reveals nothing relative to the present condition. His average weight is about 200 pounds; present weight, 147. This loss has occurred during the preceding eight months. For the past three years he has had "attacks of vomiting", which occurred irregularly. During recent weeks vomiting has occurred daily and often several times daily, notwithstanding a much restricted diet. At times he has vomited food eaten twenty-four to thirty-six hours previously. For four days previous to first visit he had eaten daily four crackers soaked in water, and these were swallowed with difficulty and often regurgitated. The patient had gastric distress excited by eating; no real pain. He was weak, his color fairly good. Physical examination: Lungs negative. Heart enlarged, a double murmur at aortic valve. Pulse 54. Left radial artery sclerotic. Right normal. Blood pressure 100 systolic. Reflexes normal. Urine scant, high color; no albumen, no sugar. At the first visit there was a faint deglutition sound after sixteen seconds. The patient could drink water if taken slowly. A stomach tube appeared to pass into the stomach, that is, it met no resistance at less than eighteen inches from teeth, but the contents aspirated were not from the stomach. After a test breakfast, a 34 F., tube was passed into the stomach and some contents obtained, the acidity of which was low. Free Hcl., 14; total acidity, 34. Pepsin present. At this time a 24 F. esophageal sound was passed into the stomach. An obstruction at the cardia was located with the olive tipped bougie at about eighteen inches from teeth.

December 9, weight 148 $\frac{3}{4}$. Patient had eaten considerable food with but little difficulty; no vomiting. No contents were obtained

from the fasting stomach in the morning. Sounds up to 34 F. were used. The patient ate a turkey dinner and December 10th weighed 152 pounds. Pulse 74. Sounds were used up to size 46 F. A bromide and belladonna mixture was employed. It will be observed that the stricture dilated quickly, consequently easily.

December 16, weight 156½. On this date roentgenograms were taken with the object of discovering the cause of the constriction. They showed an enlarged heart. With oatmeal and bismuth eaten just before, and some of it swallowed during the exposure of a plate, we were able to obtain, in this case, a complete picture of the entire esophagus, which at its cardiac end was constricted as shown in picture. As the bismuth meal at this time passed readily into the stomach, probably as the result of previous dilatation, there was no accumulation above the constriction, no evidence of a sac or diverticulum. I understand it is very unusual to obtain a picture of the esophagus even with a bismuth meal. The X-ray merely confirmed the diagnosis of stricture and an enlarged heart.

December 17, the ninth day of observation, the patient weighed 156¾ pounds, a gain of 9¾ pounds. He was eating ordinary diet; said he felt like a new man. He was given a 34 F. stomach tube filled with shot and instructed to pass it every few days (with this tube he could not harm himself, as he might with a rigid sound); to use the bromide and belladonna mixture; to return in six weeks if possible.

As stricture of the esophagus is most often due to cancer, this cause was the first to be considered. The progress of the case in nine days, the ease with which the stricture was dilated, led me to believe it was not malignant. The X-ray showed no tumor within or impinging on the esophagus. There was no history of trauma causatics, etc., consequently I concluded we had to deal with a spasmodic stricture at the cardia.

January 16, a month later, patient wrote: "I find myself just about as you told me I would be. Got along very well for a while, then it kept getting harder to eat, and now have to use the tube every day and it goes harder." The 35 F. tube was not large enough to afford proper dilatation, but it was the only instrument practically available at the time.

About February 15, 1916, the patient was advised to go to the Mayos, I suppose with the expectation that some curative surgical operation might be performed.

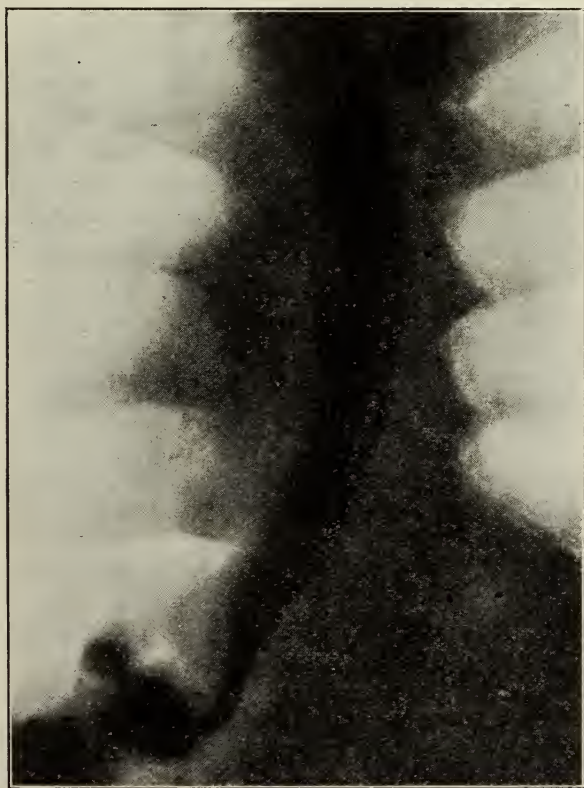
February 16, 1916, the Mayos wrote me: "Mr. S. came here January 29th for examination. We found him suffering from an obstruction of the cardia, or in other words, a cardio-spasm. We did a dilatation and he returned home.

March 7, 1916. The physician who has patient under his care writes: "The X-ray at the Mayos showed dilatation of lower end of esophagus. This was shown, I understand, previous to any dilatation, at a time when the esophagus was and had been in a state of spasm for days. The only treatment was one dilatation with the Plummer dilator and the use of belladonna.

August 12, 1916, he writes: "Mr. S. has not been completely cured. I have used the Plummer dilator twice, once shortly after we came back and once recently. He is heavier than he was in Portland (now 163 pounds), but has lost some of what he gained when he first came home. He is attending to duties of deputy sheriff.

While spasms of the esophagus are frequently seen, of slight degree, in over twenty years, I have observed but three or four cases of such severity as the case here reported. With occasional dilatation it would seem that the patient can be kept in his present condition indefinitely.

30 Deering Street.



SHOWING CONSTRICTION OF ESOPHAGUS AT CARDIA.

BULLETIN No. 11

“We are proud of Our Advertisers”

The official State Medical Journals are not ashamed of their advertisements; hence they urge their readers to patronize their advertisers. The publishers believe it is their duty to the readers as well as the advertisers to bring them together.

The California State Journal of Medicine has very truly said: “There was a time, not so many years ago, when no respectable publication would refer to its advertisements, or its advertisers. Now, however, all that has been changed; *we are proud of our advertisers* and our advertising. Nothing goes into the advertising pages that is not as carefully scrutinized as the matter that goes into the reading pages. There is no reason now why any advertiser should not be referred to, or anything advertised should not be mentioned in any part of the *Journal*.

Doctor, you may rely on the advertisements in this *Journal*. They are believed to be exactly as represented.

If you are dealing with some reliable firm whose goods you think should be advertised in this *Journal*, write and tell us so; and advise the firm of the advantage of association with other acceptable advertisers.

YOUR EDITOR.

Notices.

Medical Insurance and Health Conservation.

Our attention has been called to the merging of the *Texas Medical News* into the *National Journal*, to be known as the *Medical Insurance and Health Conservation*. It is in a field by itself, and should prove of value to the medical profession, particularly those physicians who are interested in insurance and health matters, also the insurance companies, from whom Dr. Smith, the editor, assures us that he is to receive active co-operation.

The National Board of Medical Examiners held its first examination from October 16th to 21st, in Washington, D. C.

There were thirty-two applicants from seventeen states, representing twenty-four medical schools, and of these sixteen were accepted as having the necessary preliminary and medical qualifications, ten of whom took the examination. The following men passed: Dr. Harry Sidney Newcomer, Johns Hopkins University; Dr. William White Southard, Johns Hopkins University; Dr. Orlow Chapin Snyder, University of Michigan; Dr. Thomas Arthur Johnson, Rush Medical School; Dr. Hjorleifur T. Kristjanson, Rush Medical School.

The second examination will be held in Washington, D. C., June, 1917. Further information may be had by applying to Dr. J. S. Rodman, Secretary, 2106 Walnut St., Philadelphia, Pa.

Missionary Hospital Work in India.

Qualified medical man required who is in sympathy with religious work. Passage paid and small monthly allowance made. Three years' agreement. Apply, sending copies of testimonials, to Commander Eva Booth, Field Department, Salvation Army Headquarters, 122 West 14th St., New York City.

The Medical Corps of the United States Navy.

Legislation has recently been enacted which will provide for approximately 300 additional medical officers in the Medical Corps of the United States Navy.

The pay ranges from \$2,000 per year, with quarters or an allowance therefor, for assistant surgeons with the rank of Lieutenant, Junior Grade, to \$8,000, with allowances upon attaining the grade of Medical Director with the rank of Rear Admiral of the upper half.

Applicants must be between the ages of twenty-one and thirty-two years, citizens of the United States, and must submit satisfactory evidence of preliminary and medical education. The examination for appointment in the Medical Corps consists of two stages, the first stage securing appointment in the Medical Reserve Corps, and the second stage securing an appointment as a commissioned officer in the regular Medical Corps.

After the candidate passes the preliminary examination he attends a course of instruction at the Naval Medical School. During this course he receives full pay and allowances of his rank, and at the end of the course he takes a final examination. Two of these courses begin each year, one commencing about the first of October, and the second course beginning early in February.

The examinations are held in several of the coast cities in the United States, both on the east coast and the west coast, and also at Chicago, Ill.

Literature describing the navy as a special field for medical work, and circulars of information for persons desiring to enter the Medical Corps, may be obtained by addressing the Surgeon General, U. S. Navy, Navy Department, Washington, D. C.

Army Medical Corps Examination.

The Surgeon General of the Army announces that preliminary examination for appointment of first lieutenants in the Army Medical Corps will be held early in January, 1917, at points to be hereafter designated.

Full information concerning this examination can be procured upon application to the "Surgeon General, U. S. Army, Washington, D. C." The essential requirements to secure an invitation are that the applicant shall be a citizen of the United States, between 22 and 32 years of age at time of receiving commission in Medical Corps, a graduate of a medical school legally authorized to confer the degree of Doctor of Medicine, of good moral character and habits, and shall have had at least one year's hospital training as an interne, after graduation. Applicants who are serving this post-graduate internship and can complete same before October 1, 1917, can take the January examination. The examination will be held simultaneously throughout the country at points where boards can be convened. Due consideration will be given to localities from which applications are received, in order to lessen the traveling expenses of applicants as much as possible.

In order to perfect all necessary arrangements for the examination, applications should be forwarded without delay to the Surgeon General of the Army.

There are at present two hundred and twenty-eight vacancies in the Medical Corps of the Army.

Mr. Louis R. Curtis, Formerly of St. Luke's Hospital, Chicago, Elected President of the Frank S. Betz Co., the Well-Known Surgical Instrument House.

Considerable interest has been aroused in medical circles by the announcement of the election of Mr. Louis R. Curtis, for eighteen years Superintendent and Secretary of St. Luke's Hospital, Chicago, as president of that institution.

Mr. Curtis was born in 1865 in Philadelphia. He obtained his college training at Stevens, graduating as mechanical engineer. In 1889 he entered the hospital field as Assistant Superintendent of the New York Hospital. During that period he attended medical college, not with an idea of practicing, but to better fit himself for his hospital work. From the New York Hospital Mr. Curtis went to the General Hospital of Elizabeth, New Jersey, staying there for about one and one-half years. From there he came to St. Luke's Hospital, Chicago, as Superintendent, and has been the dominating figure in that institution, both as Superintendent and Secretary, until recently, and is now Vice-President in charge of the operation of the institution. During the last years Mr. Curtis has also been prominent as a consulting engineer, especially among hospitals, and has introduced many advanced and successful ideas in hospital construction and organization. His wide experience among hospitals and medical men, coupled with his technical training, makes him peculiarly well fitted for his new position.

Mr. Frank S. Betz, under whose control the concern bearing his name assumed its present proportions, will continue with the company as chairman of the Board of Directors and give the organization the benefits of his long experience and training. His many and diversified interests are given as reasons for his retiring as active head of the company.

County News and Notes.

ANDROSCOGGIN.

Androscoggin County Medical Society recently enjoyed the hospitality of Dr. O. S. Pettengill, Superintendent of the State Sanitarium at Hebron. Dr. Pettengill proved an able host, and not only conducted clinics for the benefit of the members, but showed them over the institution, and served them with a very delightful banquet. The trip from Lewiston to Hebron was made by automobile, and proved a day very well spent.

Those who attended included: Dr. William Ness, President of the Androscoggin Medical Association; Dr. E. V. Call, Dr. J. A. Donovan, Dr. W. L. Haskell, Dr. Harold Garcelon, Dr. Horace L. Gauvreau, Dr. E. S. Cummings, Dr. S. E. Sawyer, Dr. W. W. Bolster, Dr. E. F. Pierce, Dr. C. H. Cunningham, Dr. John Sturgis, Dr. E. B. Buker, Dr. Frank E. Sleeper, Sabattus; Dr. Lewis B. Hayden, Livermore Falls; Dr. C. E. Philoon, Dr. Fernald, interne at Ste. Marie's General Hospital; Dr. Twaddle, interne at the Central Maine General Hospital; Dr. Ralph A. Goodwin, Dr. A. W. Plummer, Lisbon Falls; Dr. Blinn Russell, Dr. J. E. Dupras, Dr. C. E. Williams and Dr. J. A. Girouard.

CUMBERLAND.

CUMBERLAND COUNTY MEDICAL SOCIETY.

The regular stated meeting of the Cumberland County Medical Society was held in the parlors of the Congress Square Hotel, Friday evening, October 13th, there being fifty-two members in attendance. Dr. William P. Coues, of Prout's Neck, presented a paper on "Surgical Syphilis", illustrated by stereopticon, and Dr. W. Grant Hague, of New York, read a paper on "The Lime Starved State". Both papers were very interesting and exceedingly valuable.

Dr. Eugene Fogg, of Portland, was elected to membership.

DR. ADAM P. LEIGHTON, JR.,
Secretary.

PORTLAND MEDICAL CLUB.

The eighth regular meeting of the Portland Medical Club was held at the Columbia Hotel, November 2, 1916, Dr. F. Y. Gilbert presiding.

Dr. DeForest Weeks was elected to membership.

Dr. J. H. Harris summarized the results of one year's naval recruiting in Maine and New Hampshire and gave causes of rejection. A remarkable feature was the high percentage of the number of applicants accepted in these states, 32.8% as against 16.3% for the remainder of the United States.

Dr. R. F. Chase reported a case of esophageal stenosis.

Dr. Twitchell exhibited a pebble stone which had been removed from the bladder of a patient who had shown symptoms of vesical calculus. Presumably the stone had been introduced into the bladder through the urethra by the patient himself.

Dr. Swift reported a case of arsenical neuritis.

Dr. Adam Leighton, Jr., spoke of a case of lead palsy in which the lead had been introduced into the system in a laxative preparation taken over a period of some years.

The paper of the evening, "Some Needs of the Health Department", read by Dr. Thomas Tetreau, of the Portland Board of Health, was much appreciated by the members.

In particular, three requirements were named which seemed most urgent at the present time. 1—*Better vital statistics.* The Boards of Health need more exact knowledge as to when, where and to whom babies are born; also as to when, why and at what ages people are dying. If better statistics were available valuable information would be gained in regard to preventable causes of disability and death. As usually given, death returns in this state are almost valueless for statistical purposes. To render such data valuable returns should be made in a uniform manner so that conditions in different regions may be compared. If returns were made out in accordance with the standard forms adopted by the U. S. Census Bureau their value would be greatly increased. 2—*More infant welfare work should be done.* The proper feeding of infants and better care of milk will save many lives. In cities where these matters have been given particular attention infant mortality has been remarkably lowered. 3—Perhaps the most crying need in Portland is the *establishment of a municipal laboratory.* A trained bacteriologist should be constantly in attendance so that all necessary examinations may be made without delay. The present arrangements are inadequate.

In the process of subsequent development, equipment for the analysis of food products, building materials, etc., could be installed. This would mean the saving of considerable expense to the city.

The paper aroused interest and was freely discussed. It was generally felt that members should do everything possible to aid Dr. Tetreau in all that he is trying to accomplish, and to evoke an intelligent public sentiment in regard to health matters.

At the close of the discussion a committee, consisting of Drs. Bassford, Marshall, Vanamee, Webster, and B. B. Foster, was appointed to confer with the officers of the city government in regard to the establishment of a municipal laboratory.

A committee, consisting of Drs. Milliken, Carmichael and Haskell, was appointed to make arrangements for the annual banquet.

H. M. SWIFT, *Secretary*.

KENNEBEC.

KENNEBEC COUNTY MEDICAL ASSOCIATION.

The quarterly meeting of the Kennebec County Medical Association was held at Hotel Elmwood, Waterville, October 3rd.

Dr. D. A. Robinson, of Bangor, read a paper entitled "Sidelights on Medical History." The paper gave an interesting account of the more important cults which have diverged from the general current of medical progress since the beginning of history. Dr. Robinson demonstrated that many of these eddies had powerfully influenced the general stream, but as each had made the fundamental mistake of trying to make a part greater than the whole, it had finally become swallowed up. From this analogy he argued that, however important and influential the present medical sects may seem, they will ultimately melt into the general stream of medical progress.

S. J. BEACH, *Secretary*.

YORK.

YORK COUNTY MEDICAL SOCIETY.

The eighty-sixth quarterly meeting of the York County Medical Society was held in the county court house in Alfred, Thursday, October 5th, Dr. H. L. Prescott, of Kennebunkport, the President, in the chair.

The records of the June meeting were read and approved.

It was announced that R. W. E. Cole, M. D., C. P. H., who has

been at the head of the health department in the town of York, has removed to Akron, Ohio.

Dr. Harry E. Anderson, Bowdoin Medical, 1910, of Acton, Me., and Milton Mills, N. H., was elected to membership.

An excellent turkey dinner was served at 1.30 o'clock at the Alfred House, which is an ancient and famous hostelry, the newly-painted sign suspended in front of this historic hotel announcing the year 1807 as the time of its establishment.

At the afternoon session, Mrs. Carrie R. Dolloff, of Biddeford, President of the York County Daughters of Hygieia, read a paper summarizing the history of that organization, which was started by the wives of York County physicians, in January, 1914, at a meeting held in Biddeford. This paper was especially meritorious, and a note of appreciation was given Mrs. Dolloff.

Harold J. Everett, A. B., M. D., of Portland, instructor in obstetrics in the Bowdoin Medical School, gave an address on the subject, "The Vomiting of Pregnancy". The essayist reviewed much of the most modern and successful treatment for this troublesome affection.

Dr. Everett demonstrated the administration of nitrous oxide gas for anesthesia in obstetric practice, which has proved to be a safe, pleasant and efficient method of procedure in such cases. It was an instructive and practical demonstration.

A rising vote of thanks was given Dr. Everett.

Physicians present: H. J. Everett, Portland; H. L. Prescott, Kennebunkport; E. D. Jaques, C. E. Cook, So. Berwick; L. H. Brown, No. Berwick; R. S. Gove, Sanford; F. W. Smith, E. C. Cook, York Village; W. W. Smith, Ogunquit; P. H. Abbott, So. Waterboro; S. B. Marshall, Alfred; A. C. Maynard, Biddeford; J. A. Randall, A. H. Jones, Old Orchard.

JOINT MEETING OF ANDROSCOGGIN, OXFORD AND FRANKLIN COUNTIES MEDICAL SOCIETIES.

After three years of planning, this joint meeting finally materialized, and due credit should be given to the officials of the three societies and to their part in the entertainment.

Beginning at 10.00 A. M., Wednesday, October 25th, surgical clinics were held at the Central Maine General and St. Mary's Hos-

pitals, and the local operators were spoken of very favorably. There was a good attendance at the clinics and all united in praise of the Androscoggin surgeons.

At 4.00 P. M., the general meeting was called, and Dr. A. I. York, of Wilton, president of Franklin County Society, presided.

After a few preliminary remarks, he introduced Dr. W. S. Bainbridge, of New York, who delivered a stereopticon lecture on cancer. In rapid succession he threw on the screen pictures showing tumors in rocks, vegetables, plants and trees, where death gradually supervened. He passed to malignant tumors in the fish and animal kingdom, calling attention to the fact that cancers occur in both the meat-eating animal and the horse, which eats no meat, demonstrating that the question of meat diet in these cases is not an important one. He showed some few cases where moles and birthmarks became malignant after remaining quiet for a various number of years. Many of these cases were treated by caustics or some irritating method, which was followed by degenerative changes of malignant type. He spoke of the importance of early and complete removal of moles and birthmarks, laying particular stress on those cases, showing some evidence of irritation or ulceration. Great care should be exercised in diagnosing tumors of the breast, as some few abscess cases may be mistaken for cancer. Finally he showed a series of the apparently hopeless cases of cancer, where extensive pathological changes had taken place and where radical operative work had been done followed by plastic surgery for cosmetic effect. These cases invariably enjoyed an extension of a few years of life and fully appreciated the effort in their behalf. Dr. Bainbridge spoke in a brief and convincing manner, and coming from an authority of such standing, carried great weight to his many listeners.

The discussion was opened by Dr. Williams, of Auburn, and entered into by Dr. Webber and Dr. John Sturgis, of Auburn, Dr. Donovan, of Lewiston, Dr. Stewart, of South Paris, Dr. McCarthy, of Rumford, Dr. Leslie, of Andover, and others.

At 7.00 P. M., the members and their wives entered the banquet room and enjoyed a very delightful repast. Dr. William Ness, President of Androscoggin Society, presided at the exercises. The general sentiment expressed was in favor of making this trio county meeting an annual affair.

Dr. Bainbridge gave a very interesting stereopticon talk on "A Glimpse on Both Sides of the Firing Line". This proved a rare treat to all present, as it was a narrative of his personal experiences. A rising vote of thanks was extended to the distinguished guest.

Among the physicians registered were:

Dr. F. E. Sleeper, Sabattus.	Dr. Blinn W. Russell, Lewiston.
Dr. R. W. Bicknell, Canton.	Dr. L. J. Dumont, Lewiston.
Dr. T. S. Burr, Lisbon Falls.	Dr. W. W. Bolster, Lewiston.
Dr. A. W. Plummer, Lisbon Falls.	Dr. O. B. Head, New Sharon.
Dr. L. H. Trufant, Norway.	Dr. L. B. Hayden, Livermore Falls.
Dr. H. L. Bartlett, Norway.	Dr. V. O. White, Dixfield.
Dr. A. L. Stanwood, Rumford.	Dr. Owen Smith, Portland.
Dr. C. M. Bisbee, Rumford.	Dr. F. Y. Gilbert, Portland.
Dr. E. M. McCarty, Rumford.	Dr. D. M. Stewart, South Paris.
Dr. F. E. Wheat, Rumford.	Dr. J. G. Littlefield, South Paris.
Dr. L. W. Parady, Rumford.	Dr. B. G. W. Cushman, Auburn.
Dr. Pettengill, Hebron.	Dr. C. H. Cunningham, Auburn.
Dr. E. F. Pierce, Lewiston.	Dr. C. C. Peaslee, Auburn.
Dr. S. E. Sawyer, Lewiston.	Dr. Ralph Goodwin, Auburn.
Dr. H. S. Sleeper, Lewiston.	Dr. C. E. Williams, Auburn.
Dr. J. W. Scannell, Lewiston.	Dr. W. W. Parmalee, Auburn.
Dr. Gard Twaddle, Lewiston.	Dr. D. A. Barrell, Auburn.
Dr. William Ness, Lewiston.	Dr. H. J. Webber, Auburn.
Dr. L. F. Hall, Lewiston.	Dr. Edson B. Buker, Auburn.
Dr. George B. O'Connell, Lewiston.	Dr. John Sturgis, Auburn.
Dr. T. J. Fitzmaurice, Lewiston.	Dr. O. A. Sprague, Turner.
Dr. Doloff, Lewiston.	Dr. E. J. Brown, Stratton.
Dr. Hudson Miller, Lewiston.	Dr. F. E. Wheeler, West Paris.
Dr. Wallace E. Webber, Lewiston.	Dr. F. B. Colby, Rangeley.
Dr. W. L. Haskell, Lewiston.	Dr. H. R. Farris, Oxford.
Dr. J. A. Donovan, Lewiston.	Dr. A. I. York, Wilton.
Dr. R. J. Wiseman, Lewiston.	Dr. G. H. Hutchins, Mechanic Falls.
Dr. Harold W. Garcelon, Lewiston.	Dr. W. B. Haskell, Oxford.
Dr. William Garcelon, Lewiston.	Dr. B. F. Makepeace, Farmington.
Dr. E. V. Call, Lewiston.	Dr. H. S. Pratt, Farmington.
Dr. J. E. Dupras, Lewiston.	Dr. G. L. Pratt, Farmington.
Dr. William H. Chaffers, Lewiston.	Dr. C. W. Bell, Strong.
Dr. E. S. Cummings, Lewiston.	Dr. F. E. Leslie, Andover.

SAGADAHOC.

SAGADAHOC COUNTY DAUGHTERS OF HYGIEIA.

The second quarterly meeting of the Sagadahoc County Daughters of Hygieia was held at the Colonial Cafe, Bath, Me., on Wednesday evening, October 25th. Greetings were exchanged and banquet served.

Following the banquet, the President of the society, Mrs. Ethel Kershner, presided at the business meeting.

Mrs. Williams, of Phippsburg, chairman of the Committee on

By-laws, reported. The report of the committee was accepted, and the by-laws were adopted and will be printed at an early date.

The President appointed the following committees: Membership Committee, Mrs. Clyde Stott, Woolwich; Mrs. Hannigan, Bath. Sick Committee, Mrs. Josie Irish, Bowdoinham; Mrs. Christine Snipe, Bath. Entertainment Committee, Mrs. Dasie Fuller, Bath. Program Committee, Mrs. Mullin, Bath.

The society discussed what their work would be, and will complete plans for the same at the next meeting.

Mrs. F. N. Whittier, of Brunswick, was a guest of the society for the evening.

After a very enjoyable session the meeting adjourned at ten-forty.

Those present were: Mrs. Ethel Kershner, Bath; Mrs. Josie Irish, Bowdoinham; Mrs. Emma P. Williams, Phippsburg; Mrs. Dasie Fuller, Bath; Mrs. Nellie Hannigen, Bath; Mrs. Annie K. Mullin, Bath; Mrs. Christine C. Snipe, Bath; Mrs. Frances H. Peaslee, Bath.

FRANCES H. PEASLEE,
Secretary.

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PERSONAL NEWS AND NOTES.

Dr. J. H. Patten, of Bar Harbor, is in New York, taking special work on diseases of the eye, and expects to return to Bar Harbor sometime the first of the year.

Dr. Henry T. McCarthy, of Lewiston, who had his leg amputated above the knee, Saturday, November 4th, is reported to be resting comfortably.

Dr. George B. Phelps, of New York City, a member of the Camden summer colony, was in Camden for a few days.

Dr. C. P. Thomas, of Brewer, has returned from a hunting trip to Moosehead Lake.

Dr. W. H. Bunker, of Calais, has been elected a member of the St. Croix Club.

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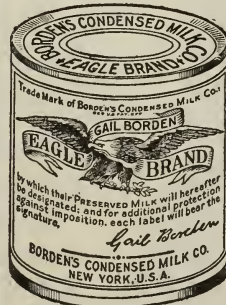
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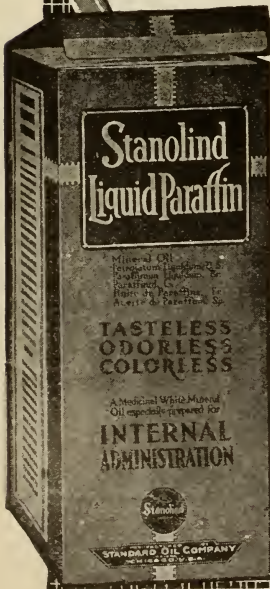
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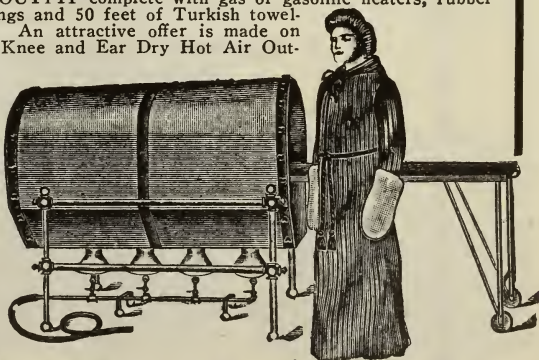
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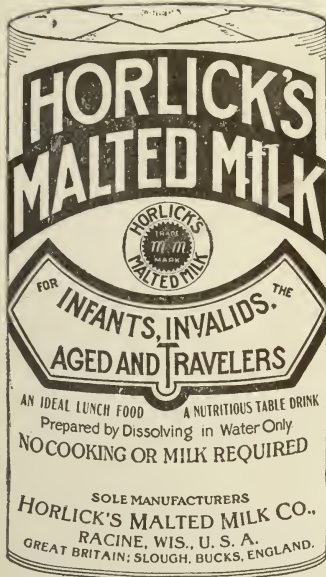
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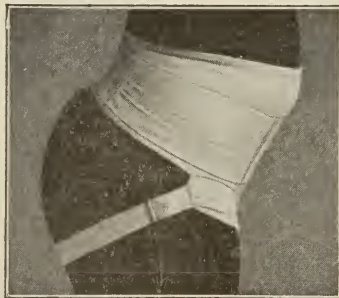
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THE JOURNAL



Maine Medical Association.

The Official Organ of the State and County Medical Societies.

VOL. VII, No. 5

DECEMBER, 1916.

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TABLE OF CONTENTS

Original Articles—

The Medical Cult Absurdity.....	141
Some Medical Aspects of Naval Recruiting	149
Adenoids as a Factor in Amblyopia.	164
Bulletin No. 12.....	168

Editorial Comment—

Health Insurance.....	169
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Miscellaneous—

Notices.....	170
Abstracts from Current Literature..	171
Portland Medical Club.....	VI

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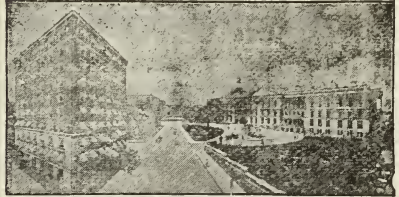
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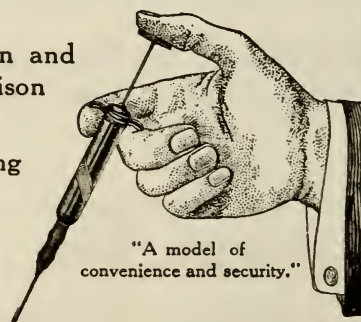
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DECEMBER, 1916.

No. 5

*THE MEDICAL CULT ABSURDITY.

By ADAM P. LEIGHTON, JR., M. D., PORTLAND, ME.

The science and art of healing the sick knows no "pathies" and recognizes no sect. The scientific practitioner of medicine acknowledges no one and only method of treatment, but seeks continually for improvement in remedial agents, in methods and in technique. He is willing to use whatever agent or method is of proven value and benefit to mankind in the prevention and cure of disease. He is not bound to any one theory.

The ability to heal the sick, however, presupposes a certain definite amount of knowledge of the human economy and certain definite well-grounded ideas concerning the abnormal manifestations of diseased conditions. It matters not what "pathy" or cult of special medicine one follows; it matters not whether the treatment advanced by the disciple of a particular sect consists of forced feeding or starvation, prescribing drugs or prescribing incantations, adjusting bones or rubbing muscles—in order to treat disease or heal the sick, one must demonstrate that such disease or illness exists. To treat disease without knowing its nature is an unscientific and dangerous procedure. One must, therefore, irrespective of the methods of treatment employed, be able to diagnosticate between the normal and the abnormal and differentiate the many and varied diseased conditions to which the flesh is heir.

"There should be one standard set for all practitioners of medicine regardless of their methods or theories of treatment and this stand-

* Read before the Maine Medical Association at Portland, June, 1916.

ard should be sufficiently high to guarantee that the practitioner is able to properly diagnose disease."

In order to practice law, one must fulfill certain requirements. He must show a sufficient knowledge of the law and its application before being admitted to the practice of his profession. No state has a different set of standards for the different kinds of lawyers applying the law according to varied theories. All lawyers must attain a certain standard. So also with other professions, a standard is set by law or otherwise, and certain requirements are demanded before one is recognized as entitled to practice his profession.

This unfortunately, is not true of the body of men or women entrusted with the cure and prevention of disease, commonly called the "medical profession." Here anyone with an idea, be it founded upon fact or fancy, may set himself or herself up as the "discoverer" of the only sure cure for disease and the only proper method of treating illness, and with a glib tongue and far-fetched statements gather a coterie of followers suffering from real or imaginary troubles, who, finding temporary or imaginary relief, herald to the world that, having tried all else, they have been rescued by the "discoverer" of the panacea for every ill. Schools are established, particular and peculiar systems of healing are taught to gullible students, lacking for the most part in sufficient preliminary education, the only real requirement being their ability to pay the matriculation and tuition fees. In addition to such low grade schools at which students are required to attend in person for an abbreviated course, now we are aware of certain enterprising pseudo-medical "colleges" which give courses of study by correspondence, and graduates of either course of "college" or home study go out and prey upon the innocent and ignorant sufferer. Our legislatures protect these irregular and irrational practitioners, who subscribe to no standards but who fleece their unsuspecting victims under the guise of practicing a certain "pathy", and object to conforming to medical practice acts, because, according to their claims, they do not practice medicine!

Medical fakery of one kind or another has always existed. Ever since the age of Perkinism, up to recent times, there have been epochs in which pseudo-medical cults and sects have especially flourished for a time and subsequently passed from the memory of man. Many of you here to-day witnessed the birth of homeopathy and eclectic medicine, and, like us all, you have noticed the gradual decline and passing of each. In like manner do all peculiar systems of practice come and go. It is to be expected.

Never before, however, has sectarian medicine and foolish fancy

in the healing art existed to the extent or limit that it does to-day. It is indeed ridiculous, and yet it brings with it the stern realization of the fact that it is high time for the medical profession, which we represent, to arouse itself from its accustomed apathetic state, which alone has allowed our rights and privileges as medical practitioners to be quietly and easily stolen from us.

I intend to incorporate in this dissertation, if nothing more, an earnest plea for an awakening on the part of each and every one of you here congregated, to an understanding of the matter with which we are brought face to face, hoping thereby that through concerted action and purpose we may ultimately gain for ourselves a stronger and better medical practice act, to protect the public and the profession from the menace which confronts us.

I shall speak of the osteopath and osteopathy, but shall spare you the tiresome descriptive details of chiropractic, mechano-therapy and other allied mechanical fakes, for in considering osteopathy, its claims and its theories, these systems, which are but offshoots, will be understood to be necessarily included.

What is osteopathy? To quote from osteopathic literature, we find that the definition given is as follows: "Osteopathy is the modern school of manipulative, adjustive medicine and surgery which treats disease and deformity according to mechanical principles, without the use of drugs or knife." Its new viewpoint is that disease for the most part lies within the tissues in the form of faulty relation of part to part, maladjustment of structures, abnormal contractions, congestions, mechanical disturbances, the logical remedy for such states of disease being, of course, to adjust the disorder, to relax contractures, to replace displaced structures. Isn't that simple enough? And those who uphold this theory want to practice medicine in this State, as you and I are doing, and are constantly clamoring for legal recognition.

The history of osteopathy is so closely connected with that of its founder and "discoverer", Dr. A. T. Still, that one cannot be given without the other. To quote from the catalog of the American School of Osteopathy, we note that "Dr. Still was born of sturdy pioneer stock and inherited the dauntless courage and determination that is characteristic of those who forge ahead and walk upon untrodden ground." "He became no less a pioneer than his parents when he stepped out of the ranks of the medical profession [and I cannot find proof that he ever belonged to it], of which he was an honored member and declared to the world osteopathy."

So much for the catalog description of this able gentleman. A more truthful statement and representation would be to say that

"Crazy Still," as he was known among his neighbors in Kirksville, Missouri, became dissatisfied with his lack of success as a practitioner of medicine and decided to invent a system of his own. Thus was osteopathy born. This cult of "drugless healing," which of all has attained the greatest day popularity, was "discovered" in 1874, and in 1892 the first school of osteopathy was established by Dr. Still in Kirksville, Missouri. According to the catalog practically all subjects are taught in this school as in regular medical colleges, with the exception of materia-medica, pharmacology, therapeutics and the practice of medicine. Particular note and emphasis is laid upon this fact.

Osteopathy is "opposed to the use of drugs as remedial agents," "Opposed to vaccination," and "Opposed to the use of serums in the treatment of disease." Opposed to vaccination, in spite of the fact that vaccination has robbed small-pox of its horrors and rid the civilized world of the epidemics which left death and disfigurement in their path! Instead of a proven method of controlling this disease, the ingenious discoverer of osteopathy states: "When they learn that a fly blister as large as a fifty cent piece will keep off small-pox in all cases, then there will be no fear or trouble about small-pox or vaccination." Here is one of the instances in which he slips off the plank in his platform which is "opposed to the use of drugs as remedial agents," for he not only advocates the use of cantharides as a blister for the prevention of small-pox, but he believes that it "will be just as protective against measles, diphtheria, scarlet fever, leprosy and syphilis, and other infectious contagions, as against small-pox." These beliefs have been inculcated into the minds of five or six thousand graduates of the Kirksville School as well as the graduates of other institutions in this country devoted to the teaching of this alleged "science." Osteopathy is opposed to the use of drugs as remedial agents in spite of definite and certain proof of the practical eradication of hookworm and syphilis with a drug. They are opposed to the use of serums, antitoxins and vaccines, in spite of the fact that in diphtheria, antitoxin is of immediate curative value and has saved the lives of seventy-five children out of a hundred affected with this disease. And we allow them by law to carry their opposition into practice!

They teach surgery in their schools, realizing that cases do require surgical treatment sometimes, hence they "advocate it as a last resort." Thus while scientific workers and thinkers, without hope or desire of pecuniary gain, have demonstrated that the only aid and hope offered to victims of cancer is through early and complete removal of the growth, we allow, by law or exemption from the law, these unscientific and ignorant practitioners of a cult whose sole desire

seems to be that of mercenary gain, to "treat" their deluded victims until all hope of cure is past, and then "as a last resort" advocate surgical intervention.

What has this alleged science known as osteopathy accomplished for the good of humanity? Has it produced during its three decades of existence one man who has raised the standards of the healing art? Has it given birth to one practical idea for the prevention or cure of diseases? No, most assuredly not, but it is seeking to overthrow, by its silly teachings and exploitation of a worthless theory, conceived and nourished in ignorance, the achievements of generations of scientific workers and thinkers. This vaunted "discovery" of an unsuccessful physician, poorly educated and palpably unscientific, pretends to discredit the work of the master minds which have conquered small-pox, diphtheria, yellow fever, typhoid fever and other preventable diseases.

Were osteopaths sent to the Canal Zone to make possible the world's greatest sanitary feat? Are osteopaths working in the trenches among the soldiers of Europe's warring nations? Are osteopaths as osteopaths doing anything else except play upon the credulity of the human mind? The public enjoys being humbugged and crowds to the doors of those who practice fakery. The newest medical cult always draws heavily from the gullible and curious.

If the osteopath would practice that which he so loudly preaches all would be well and good. Osteopathy, aside from its inane theory for the etiology of disease, may have some good in it, obtained through its hidden principle, massage. Perhaps we were slow in recognizing and making use of this remedial agency, hence for that fact the credit belongs to them for its therapeutic adoption. If the osteopath were content to practice *osteopathy*, not one word in opposition would be spoken, as long as they did not infringe upon the rights and privileges of the medical practitioner. But you know and I know that the osteopath has only one desire, that of practicing medicine. They all practice medicine or attempt to practice it. I have ample proof that osteopaths here in our own City have and do practice illegal medicine. They realize the shortcomings of their system and long to adopt the principles of medicine. They give drugs and medicines, they practice surgery and obstetrics, they write prescriptions, some are registered under the Harrison Narcotic Act (and that in open defiance of the provisions of the Act), and they juggle the prefix "Dr." and the word "physician" that they may impress their patients with the idea that they are medical practitioners. They laugh at and sidestep the provisions of the sections of our law which prohibit such privileges. Isn't that proof that they are masquerading as "drugless doctors," and that their

pretensions are simply a cloak under the protection of which they obtain the right to treat disease in a certain manner, exempted from the medical practice law? And especially do they convict themselves out of their own mouths when they, by false representation, register under the Harrison Act. It is to laugh. Only one more ludicrous feature could be added to this absurd situation. It would be if our Christian Scientist friends, who have been far more consistent, now came forward and demanded the right to administer drugs for the relief of pain which they claim to be non-existent!

Gentlemen, the time has come! How much longer will you sit back and allow this foolishness to continue? You and I have been required by law to prove our right to and fitness for, the practice of medicine. We have conformed to the law and have undergone examination with other rigid requirements before we have been allowed to publicly offer our services as physicians and surgeons. Why should these pernicious sects be privileged to practice medicine without inquiry into their qualifications for such? Why should they not conform to our law? Why should we year by year allow these people to quietly slip into the practice of medicine by a back door route? They practice the healing art, they prate over the fact that they study the same medical subjects as do we, with one or two exceptions. Why shouldn't the same requirements be exacted from them as are asked of us?

As surely as legislature in this State convenes, just so surely does this cult appear before it and plead for protection and regulation. But in what manner do they propose to obtain it? They ask for a separate board of registration, and right here is the little joker. If they could obtain this they could practice osteopathic medicine to suit themselves, with the same rights and privileges as we have, and not be held to the provisions of our act as it now stands, for any clause in our medical law which would conflict with their act "would be declared null and void." If the osteopath wishes regulation he should have it. They need it badly enough! If he wishes to practice osteopathy he should live up to the same requirements as the doctor of medicine. His osteopathic education embraces the study of medicine—they claim that fact, their literature proves it. We should fight first, last, and always when it comes to allowing them a separate board of registration. They are not entitled to it for a moment. Where would such a thing end? The chiropractors, magnetic healers, chiropodists, mechano-therapists and what not, would make the same demands and would have just as much reason to ask for separate registration, if the osteopaths were granted theirs.

If it should come to pass that the medical profession should be asked just what they were willing to allow the osteopath, I feel that the proper solution of the question would lie in allowing them to have an osteopathic member on our board and require them to take examination in all the branches of medicine with the exception of materia medica, pharmacology and practice, substituting for these osteopathic mechanics and osteopathic practice, the examination papers for the last two subjects to be set by their osteopathic member. If, after having shown that they were graduates of a regular accredited osteopathic school or college, they shall successfully pass the board examination, they shall be duly registered as an osteopathic physician and allowed to practice osteopathy with all the further rights and privileges of a registered physician, except that "they shall not perform surgical operations with the use of instruments or give drugs." This ought to satisfy them, and once for all it should settle this controversy which has been a biennial source of bother to us all.

In closing, I would say that our own medical practice act would be particularly satisfactory and adequate if one clause which it now contains could be stricken out. As it now reads, in Section 16, any clairvoyant, hypnotist, metaphysician, masseur, Christian Scientist or the practitioner of any other method of healing, is exempted from complying with our law "if no poisonous or dangerous drugs are employed." The words "poisonous or dangerous" should be eliminated. Who can say what drugs are poisonous and dangerous and what ones are not? This one clause has been the "loop-hole" for escape for those who do administer without legal right as a medical practitioner.

I hope that while this Association is in session, as this is our annual meeting, we may take some definite action upon this matter of legislation for the osteopath and the strengthening of our own medical practice act. It should be done. Something will happen one way or another before long, and a little "preparedness" in this direction may not be all for naught.

DISCUSSION.

THE CHAIRMAN: The discussion will be opened by Dr. F. Y. Gilbert.

DR. GILBERT: Mr. President, and Members of the Association: I feel that this is an extremely important and a timely paper. The question of the history has been gone into by Doctor Leighton very satisfactorily. I think that the point the paper aims to bring out is that there should be concerted action on the part of the Association. During the last two or three sessions of the legislature, I have attended the medical meetings and the legislative committee hearings. The first hearing that I recollect in which this matter was discussed was one in which many medical members of the House and Senate were

present, and we tried to get the members there to agree to allow an osteopathic member on our board. They voted flatly not to do so. The result was that, when the members went before the Judiciary Committee, each one was asked whether he would favor putting an osteopath on our board, giving them a show, and they could say only no, because previous action of their colleagues bound them. The result was that the matter was left in a very ludicrous position and that was somewhat pathetic to those of us who did not take an active part. As I remember, the Attorney-General at that time asked the members appearing before the committee to define the practice of medicine. If you ever have to answer that question you will find it a difficult one. He maintained that the practice of medicine was the giving of medicine internally, and when Doctor Gordon and other members got up and said it was the practice of the healing art, it was not enough. The Attorney-General took up this bill, which was almost an exact duplicate of our bill, giving the osteopath every privilege that we have in our bill, and he said: "Now, gentlemen, this bill I have in my hand states that the osteopath does not want to practice medicine." That bill was reported favorably by the committee, passed by the House, and that same attitude was adopted for two or three sessions. At the last session Doctor Robinson was chairman of our committee. He went before the Judiciary Committee, and took the attitude that the medical profession was not opposed to the osteopaths, that we wanted to treat them fairly and meet them halfway, that we recognized the fact that they are practicing osteopathy, so-called, and that the public had accepted them as such, and we had no grievance with them, but if they wanted to practice osteopathy, be recognized as such, we were perfectly willing to take one of their members on our board or let them have a separate board, restricted absolutely to osteopathy, and nothing else. The Judiciary Committee referred the question to our committee and the Attorney-General (Pattangall), who was employed by the osteopaths. They got together and our committee found that the osteopaths would not accept a member on our board. The result was that our committee framed a bill which gave the osteopathic body a separate registration law, but restricted them absolutely to osteopathy and nothing else. They could not even open an abscess. That bill passed the Senate, came into the House and was killed by some medical members in the House. Now that is a fair illustration of the way we go at this legislative work. There is no agreement. When we go into it, we do so without any understanding of what we are endeavoring to accomplish and there is always somebody jumping in at the wrong time and upsetting things. It seems to me, as I said at the beginning, that the great point is to get together and understand what is to be done. I think Doctor Leighton has outlined this work unusually well and has given you a good idea of the present status of conditions.

DR. LEIGHTON (in closing):

I am sorry that Dr. Gordon is absent. He was one whom I particularly wanted you to hear on this matter. He knows the thing from beginning to end. To Dr. Cousins, Dr. Gilbert and Dr. Gordon we owe a great deal. They have "at the eleventh hour" appeared before the legislative committee and saved the day for us.

This question is one which should have the attention of each member of this Association. As the time for the convening of Legislature draws near, do not allow yourself to "let things slide". One should be as interested in the matter at hand as the next one. We want what is right only and we want others to have their lawful rights, too, but when anyone wishes to practice medicine let us see to it that he qualifies as each and every one of us has done. Get busy and do your part!

***SOME MEDICAL ASPECTS OF NAVAL RECRUITING.**

By DR. J. H. HARRIS, U. S. NAVY,

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The subject of this effort on my part, "Some Medical Aspects of Naval Recruiting," may possibly be most intelligently presented by discussing it under the following heads:

1. An endeavor to give the members of the Portland Medical Club a clear and more definite idea in regard to the duties of a naval medical officer while on recruiting service.

2. To shed more concise and reliable knowledge in regard to the type of young man whom the Navy Department desires as a member of the enlisted personnel.

3. To point out the many obstacles and difficulties, many of which seem well-nigh insurmountable, which the novice has to overcome before being looked upon as a thoroughly capable examiner.

4. An appreciation of the very great importance of the work of the naval medical officer attached to a recruiting station, and the necessity for skill and care in its performance.

5. Whether in its ultimate expression the ideal physical examination of a recruit does not include the work of several specialists.

"No one who has studied with ordinary care the vital statistics of the naval service can fail to agree with the conclusion that the health of a navy is primarily in the hands of the medical officers at recruiting stations." These are the words which form the opening paragraph in the chapter on "Naval Recruiting" in that most celebrated and widely known treatise on "Naval Hygiene," by Medical Director James D. Gatewood, U. S. Navy, now commanding officer of the Naval Hospital and President of the Board of Examiners of the Naval Medical School, Washington, D. C. These words have for years proven an unfailing source of inspiration to naval medical officers while on recruiting duty and have stimulated them to higher aspirations and more vigorous and painstaking efforts in their all important work.

The recruiting surgeon stands at the door of the Navy, and none enters unless pronounced physically and mentally fit. His duty is to safeguard the interests of both the service and the candidate for enlistment. A recognition of this fact is absolutely essential, inasmuch as it gives the examiner an appreciation of the very great importance of his work and of the necessity for skill and care in its performance.

* Paper read before Portland Medical Club, September 14, 1916, and before Oxford County Medical Society at Mechanic Falls, Me., September 25, 1916.

This conception of the important position in the service occupied by the examining surgeon attached to a recruiting station dignifies a work that is too often regarded as merely onerous and undesirable, and places the subject as worthy being made a specialty from a service point of view as any other of the many in which special knowledge is sought with the eagerness that is fostered by the ambition for personal professional distinction.

Unfortunately, the results of the work of an examiner may not be susceptible of consideration from quite the same point of view as the results secured from professional work along some other lines. If a capable surgeon operated in a thousand cases of appendicitis and lost the ordinary or usual percentage, there is no criticism attached to his work because conditions not under his control have varied and unforeseen complications have in all probability intervened, and it is presumed that the surgical work has been done as skilfully in one case as in another. But if the same individual had examined 1,000 applicants for enlistment in the naval service, the number of good men secured may not become so much of a factor in the judgment passed upon the work as those who are ultimately discharged from the service for physical disabilities existing prior to enlistment. In the work of the medical officer on recruiting duty, although the very opposite holds good in all the other branches of medical science, it is the mistakes that attract attention, and not the successes, and the personal question tends to make this particular sphere of activity unacceptable and to eliminate the subject from the list of those desired for special study. It is perfectly clear, however, that the good of the service demands such study and that the necessity for special development along that line is as urgent in a Navy as along any other line of medical work. In fact, the great importance of such duty cannot be overestimated and it cannot be too clearly understood that it is one of the most difficult and one of the most responsible duties that a naval medical officer can be called upon to perform.

It would, therefore, appear that for the proper performance of that duty the prerequisite is thorough and detailed knowledge of service requirements. No words can convey to the civilian physician the disadvantages in active service afloat of even a relatively small percentage of undesirable men, or the variation in the physical demands in the different ratings, or the methods of life on board battleships and the mental attitude of the recruit in comparison with that of seafaring men as a class. It therefore follows that in recruiting an additional percentage of errors may be expected from examiners who have never had sea service, and who have thus had no opportunity to acquire

other knowledge of service requirements than is expressed in printed instructions, are not impressed with the full importance of the work in which they are engaged or, from a service point of view, the value of departures from the normal in degrees that in life on shore might even be regarded as of little or no consequence. Such an examiner is badly placed, at least unless his selections are to be carefully considered by more experienced minds and under better conditions before the undesirables have cost much in money and in loss of service, or perhaps have even managed to secure pensions or have passed into some institution for the care of the mentally disordered.

This phase of the subject may be profitably carried to a still higher plane. If the good of the Navy demands that the physical examination of recruits shall be a specialty, and it is then recognized that such work is one of special difficulty, it is evident that, as in all other specialties, only certain minds can have the aptitude necessary for its most successful cultivation. It therefore follows that even among those available to make such examinations, service at sea is not the only prerequisite for most satisfactory results.

Another question of importance that must be answered in the affirmative is whether in its ultimate expression the ideal physical examination of a recruit does not include the work of several specialists. In other words, it may be deduced logically that a naval service needs a number of good examiners in the field, selected, as far as practicable, with regard to special aptitude for such work (a specialty in itself), and also central boards, each member of which has been carefully selected on account of his knowledge along certain lines, one member, for instance, examining eyes, nose, throat and ears, another the chest, abdomen and limbs, and a third, perhaps the most important, passing judgment upon the availability of the individual considered as a whole under an appreciation of the fact that the object of the medical examination in recruiting is not only to secure human machines that appear to be in good order, that are working well, that are not in state of disease, but also those made of sufficiently good material in the proper proportions to stand the strain of naval life.

In general terms, it is not merely a question of size and freedom from disease, but also a question of vigor and freedom from tendency to disease. Standards of measurements in inches and in pounds have their great importance, but a knowledge of the appearance of good health and of a vigorous and healthy personality is as essential in securing good results. For, while break-downs in the human machine are the common causes of death, such break-downs are closely connected with the quality of the material in the machine; environment

in any given case is far from being the only factor. The existing cause of a break-down in a human mechanism is often operative because of the presence of a predisposing cause—a condition of susceptibility or small vital resistance.

Enlistments in the United States Navy are for four years and the period of peace is the period of preparation for war. No service duty is of more importance than that which has for its object the placing in time of peace upon vessels constructed for war or to maintain peace a personnel capable of giving that construction its best expression. All the navies of the world are in fierce competition for the best designs of ships, including capacity to take maximum punishment and ability in machines to inflict maximum punishment, but the most indispensable physical mechanisms are the men themselves, and to secure a personnel of maximum physical and mental efficiency is as much to be desired in time of peace as to secure any other engines of war of maximum efficiency, and should be the highest ambition of the naval medical officer while on recruiting duty. And, as in the case of all other machines, the main problem of human efficiency divides itself into two essential problems: First, to secure the best machines, and second, to maintain those machines in the best of condition. It is in the solution of the former of those subsidiary problems that the necessity for the best system of recruiting is declared, and it is in the solution of the latter that administration and hygiene find expression.

During the period between September 14th, 1915, when the central recruiting station in Portland, and the branch stations at Bangor and Lewiston, Maine, and Dover, N. H., were established, and the end of the government fiscal year, July 1st, 1916, 1,095 men have undergone the physical examination necessary for enlistment. Seven hundred and ninety-four of these men, failing to measure up to the stringent requirements, were found disqualified, and consequently were rejected; 301 were accepted, or, in other words, 27.4% of the applicants succeeded in passing one of the most rigid and exacting physical examinations under the government service. When the fact that on an average only about one out of six, or 16 $\frac{2}{3}$ per cent. of the applicants who take the physical tests succeeded in qualifying, it will be readily and clearly seen that the Pine Tree State is the home of real men and that there is something in the climate and the environment of the State of Maine that serves to develop a type of young man who, on the average, is the peer of the young manhood of any other state in the Union.

In order to give the civilian practitioners present a clear insight into and a definite idea in regard to the diversified nature of naval re-

cruiting duty, the various causes for rejection of the 794 applicants is submitted:

Deformities of various types	14
Ear: Defective hearing	13
Other auditory diseases	12
Eye: Color blindness	8
Defective refraction	183
Other visual diseases	2
Flat-feet (Pes Planus)	14
Hemorrhoids	7
Heart affections	3
Hernia, or tendency to	10
Mental diseases, including Constitutional, Psychopathic state, Dementia Præcox, chronic masturbation, etc.	1
Nasal abnormalities, including deflected septum, enlarged tur- binates, atrophic rhinitis, ulceration of nasal mucous mem- brane due to cocaine, or heroin snuffing	1
Skin diseases, chronic in character and not amenable to treat- ment, as psoriasis, eczema, etc.	10
Defective teeth	112
Tuberculosis or suspects	29
Varicocele and varicose veins	80
Venereal diseases, including chancroid, gonorrhœa and syphilis...	34
Non-citizen	38
Bronchitis (acute)	14
Insufficient chest expansion	1
Under height and under weight	138
Under and over age	37
Phimosis	1
Illiteracy	5
Undesirable (prison record, criminal tendencies, chronic alcoholics, etc.)	9
Ordinary discharge, not recommended for re-enlistment	1
Medical discharge, not recommended for re-enlistment	1
Enlarged testicle	1
Objection of parents	7
Hammer toes	3
Hydrocele of cord	1
Minute or absent testicle	4
Web feet	1
Over 8 years out of the service, rejected for enlistment in Naval Reserve	1

The Recruiting Surgeon should be of an open mind, patient and painstaking, and should never allow a sudden dislike or sympathy to affect the impartiality of his judgment. A fixed routine of examination is absolutely essential and after being established should be rigidly and unswervingly followed, as such a method of procedure prevents confusion, saves time, eliminates omissions, and is the only way to insure a complete, thorough and exhaustive examination.

Common varieties of attempt at fraudulent enlistment which the Examining Surgeon should always keep in mind are:

1. Age falsely sworn with intent to deceive.
2. Men who have been previously rejected physically by the naval or other military service and who deny the fact.
3. Deserters or men with dishonorable or medical discharges who deny the fact. These men usually give an assumed name. The recruiting officer is always vigilant in detecting these frauds, but the medical officer should be on the alert for them also, and he has many opportunities for detection that are not open to the recruiting officer. A fraudulent enlistment, as a result of the finger-print system of identification which has been employed by the Navy Department for years, is almost certain to be followed by detection, and entails a loss of time and money to the government. Even if undetected, most of this class of recruits will prove worthless, with the possible exception of the boy who has lied about his age in order to pass the minimum legal age limit, and perhaps even in his case his relatives will turn up and demand the annulling of his enlistment.

A man who has previously had a thorough physical examination will often betray a familiarity with the routine. In inspecting the anal region, if such a candidate be told to present his back to the examiner and stoop over, he will often pull his buttocks apart without further instruction. Then, if asked in a casual voice, "When were you examined before?" he may be caught off his guard and admit a previous examination. With his back to the medical examiner, if the command is given to turn around, and the applicant does "an about face" the inference that the candidate is a member of some military organization is obvious.

The command to draw back the fore-skin will frequently be followed by milking the urethra in the sophisticated.

"Head" is a shipboard term for "toilet." If an applicant for enlistment is asked how long since he was at the "Head", and he understands it, he has probably been to sea, and in the Navy. Of course, he may have heard the term from some naval relative or friend.

An explanation of the infallibility of the finger-print system of

identification, and a display of careful plotting of marks of identification, may be followed by a sudden withdrawal of the candidate. If a candidate, after having qualified physically, requests permission to leave the recruiting station for a moment before being sworn in by the Recruiting Officer, we never expect him to return. Sometimes at an inland station a man will try to enlist in order to obtain free transportation to the coast. Examiners on Marine Corps recruiting duty should be especially careful, as marine recruits are not sworn into the service until they reach the recruit depot.

Ninety-five per cent. of the men who enlist in the Navy fraudulently, by concealing previous military service that is discoverable, are tattooed in a manner characteristic of the naval or military service. This fact has been demonstrated by a close observation of the records for the last five years in the identification bureau of the Navy Department. As a result, it has been found that men with certain tattoo marks will almost invariably be identified as having served previous enlistments in some branch of the military service. A list of the tell-tale tattooing follows:—

1. Shoulders tattooed with female heads or figures, birds, animals, grotesque figures, butterflies and stars.
2. Butterflies on any part of the body.
3. Eagle and globe.
4. "C. A. C." (meaning Coast Artillery Corps), "U. S. N." (meaning United States Navy), "U. S. A." (meaning United States Army), and "U. S. M. C." (meaning United States Marine Corps).
5. "Death before dishonour," "In memory of my mother," "In memory of my father."
6. Tombstone and weeping willow.
7. Pig tattooed on foot. (In olden times it was believed by sailors that if they had a pig tattooed upon the instep of the left foot it would be impossible to drown.)
8. Men who have "Manila, P. I.," or the name of any foreign port tattooed on their person have invariably been found to have had military service.
9. Sailor's head, eagle and shield, crossed guns, apprentice knot (figure of eight), star or other marks upon the umbilicus, tattooing on the penis, tattooing below the waist, obscene tattooing, tattooing on the buttocks. Designs such as dragons, butterflies, animals, and Japanese women are used almost exclusively by the tattooer in the Orient.

Applicants for enlistment who are tattooed in any one of the above-mentioned ways are not enlisted until their finger-prints have been taken and forwarded to the Bureau of Navigation to determine whether they have had prior service in the Navy. Such men will apply in most cases for enlistment in the ratings of coal passer, fireman, ship's cook, baker, seamen, and ordinary seamen.

An obviously altered tattoo mark should immediately cause suspicion. The identification experts in the Bureau of Navigation have found that tattoo marks, especially butterflies, on the shoulders, are more distinctly naval in origin than any other. Extensive tattooing does not necessarily indicate a naval or even a maritime experience, but even though the applicant be cleared of suspicion as a "repeater," the young idler who has his skin surface covered with tattooing is often an undesirable frequenter of saloons and dives.

When the examination is nearly completed and the confidence of the suspected candidate has been won by kindly treatment and friendly conversation, he will be off his guard, and inquiries as to birthplace, age, previous residence, previous illness, family history, etc., may elicit a truthful answer where a false statement was made before.

In examining the penis for gonorrhœa the recruiting surgeon does not depend upon milking the urethra, but has the applicant urinate in his presence. Many of the applicants are sophisticated enough to urinate just before they are ushered into the presence of the Medical Officer. The underclothing of each candidate is examined for pus. In case the meatus urethri is red and congested the applicant is kept at the recruiting station long enough to show whether there is supuration.

Temperature:—Just before beginning the examination of the heart and lungs the temperature is taken. A fact noted by recruiting surgeons is that applicants very frequently display a slight elevation of temperature, as high as 99.6 degrees F., with no discoverable cause, unless it be due to nervousness or excitement. According to some authorities this may be a normal temperature in some individuals, with a maximum normal diurnal range of 1.8 degrees F. In these cases, if the man is otherwise desirable, he is allowed to dress and sent to the reception room to talk with the enlisted men, or on some trivial errand, so that he regains his composure, and the temperature is taken again after two hours or on the following day. In case the diurnal maximum remains high, the recruiting surgeon is cautious about accepting such an applicant.

In case of a disability which may be temporary, such as an acute bronchitis or insufficient weight, the applicant is encouraged to return

again, and he is given advice as to how to overcome the defect. It has been my experience, since beginning recruiting duty, that the bronchitis of cotton-mill workers does not clear up. Many applicants are below weight simply because of insufficient nourishment. In many cities the aid of charitable organizations may be obtained for these men in the way of obtaining temporary employment or food and shelter.

In case the recruiting surgeon has reason to inquire about possible symptoms, he does not say: "Do you feel so and so?" but asks leading questions, as if the possession of such symptoms were a matter of course, as "How many times do you get up at night to urinate?" "How much weight have you lost in the last year?" "How long have you been sweating at night?" "How much do your ears discharge?" etc.

In cases where it is possible to remove disqualifications by surgical means, in many cities arrangements are made with local hospitals to admit these cases for early operation upon a note or card from the examining surgeon. There are frequently retired naval medical officers or Medical Reserve Corps officers in the vicinity who practice a specialty or are connected with hospitals who are of assistance in this respect. In any case, it is made clear to the candidate that enlistment cannot be guaranteed after the operation. The applicant is informed of the probable time before he could be enlisted if operation proves a success. Capable dentists may be found who do work for a reduced fee to remove disqualifications. A local hospital may be found to make laboratory examinations.

It sometimes happens that an examiner will become impressed by some particular defect, especially if some recruit passed by him was later discharged from the service for that defect, and he will get into the habit of being too exacting concerning it.

The aim of the recruiting surgeon is to get strong, vigorous, active, healthy men. Many of the applicants will have no organic defects and may be able to squeeze past the height and weight requirements, and still not be nearly as desirable physically as another who may be robust and vigorous, but has some minor disqualification, which might be waived by the Navy Department. As an instance, relaxed external inguinal rings should not be too severely considered.

When a report of the medical discharge of a recruit passed by the recruiting surgeon is sent him, he should profit by the knowledge gained, but he should not allow it to make him too timid. It does not necessarily indicate implied inefficiency or carelessness, except, of

course, in the case of some such obvious defect as an ankylosed joint or grossly defective vision or hearing.

The attitudes of the candidate, and of the same man after he becomes a recruit, may be diametrically opposed. The shiftless, lazy individual, while being examined for enlistment, will endeavor to conceal the same defect that he may be exaggerating in a short time after he has become tired of a regular life and of regular work. The pinch of winter or of hard times will diminish the rheumatic twinges or sharpen the hearing at the recruiting station, but the advent of spring and the lure of the road will have an opposite effect upon the same man after he has become a coal passer on a battleship.

The recruiting surgeon should never forget that the candidate for enlistment is undergoing an experience probably unique to him, and his embarrassment and desire to appear self-possessed may cause him to appear surly and flippant, when such traits may ordinarily be foreign to his disposition. A candidate who is treated with kindness and consideration always becomes an aid to recruiting, whether accepted or not, and will be the cause of other applications being made, and it takes a great many applications to furnish the needed good material. The recruiting surgeon should be searching in his examination, but, at the same time, patient and considerate.

The Naval Regulations definitely prescribe that a man shall be examined only when clean and sober. In case he is under the influence of alcohol he should not be examined, then or subsequently, as he is undesirable. If his body is unclean, but the applicant is sober, the circumstances should be taken into consideration, as they may be beyond his control. Some of the men come long distances to reach the recruiting station, and many have had to travel without money, riding on freight trains, sleeping in haystacks, and cleanliness may have been impossible, especially in cold weather. Unless a man shows signs of long-continued dirt, and is unashamed of it, he may not be undesirable. The most unclean man may be desirable, if he voluntarily apologizes for the condition of his body and can give an acceptable explanation. In many cities there is usually some place to which a man may be sent for a free bath, if there are no bathing facilities in the recruiting station.

The examination of the skulls of men with long hair should be unusually careful. A most marked asymmetry, or depression, or extensive post-operative scar may be concealed by the hair.

The enlistment of recruits results from the concurrent action of the recruiting officer and the medical officer. The recruiting officer concerns himself chiefly with aptitude and character and the medical

officer with physical and mental condition. They both want to obtain desirable men and are interested in excluding the alcoholic, the vagrant and the criminal. When the candidate reaches the medical officer he has already appeared before the recruiting officer and has been considered to meet the requirements as to general fitness, aptitude, and character, and to meet the special requirements for the rating for which he has been considered, so far as they may be determined without the physical and mental examinations required to be made by the medical officer. The candidate will, therefore, appear before the medical officer with the rating for which he is to be examined designated, and by his appearance it is understood that the recruiting officer thinks him a likely or suitable person.

Real bromidrosis is a sufficient cause for rejection. Aboard the modern battleship the enlisted men sleep very near each other, and the man with foul-smelling feet will prove a general nuisance, and will be made miserable himself by the neighboring bluejackets who have been so unfortunate as to have been assigned to a hammock in that portion of the deck.

Heart Murmurs:—If after careful examination the recruiting surgeon is convinced that a murmur is functional and not organic in character, he should not hesitate to request special authority from the Navy Department to enlist such a man provided the candidate is otherwise sound.

The examination of the eye should be thorough. Trachoma is more prevalent in this country than is generally believed, as shown by a survey made by the United States Public Health and Marine Hospital Service in certain sections of the South.

The recruiting surgeon must always beware of the "weak sister" with effeminate mannerisms. Such a pathetic specimen of masculinity will in all probability sink under the fire of his shipmates' raillery and sarcasm. The American blue-jacket is absolutely unmerciful in his jibes and thrusts at a man so unfortunate as to possess any marked peculiarities, either of person, voice or manner. For the same reason the candidate with huge, outstanding ears or other very prominent features should cause reflection, unless he possesses the physical size and disposition to enforce respect.

Drug Habitués:—In this class of men we always look for hyperæmia or ulceration of the nasal mucosa due to cocaine or heroin snuffing and the skin surface is always gone over carefully in order to discover, if present, marks of needle-punctures.

Every recruiting officer has a laudable ambition to secure as high a percentage of recruits as possible, but the medical examiner should

not allow this desire to interfere at all with his judgment in passing upon the mental and physical qualifications of a candidate.

The recruiting surgeon is always careful that no doubt which he may have in his mind about passing a defect is apparent to the candidate for enlistment, because the applicant may make capital of it later in an attempt to get a medical discharge for "cause existing prior to enlistment."

Hemorrhoids:—In any case of tendency to varix or varicocele we are especially careful in looking for internal hemorrhoids. A large-sized varicocele is sufficient cause for rejection. These bunches of veins feeling like worms appear in many sizes. The general rule, as formulated by Trippler, and which is adhered to in the naval service, is as follows: "If the testicle upon that side is atrophied whatever may be the volume of the varicocele, or if the volume of the latter exceeds that of the sound testicle, the recruit should be rejected." In the examination it is well for the examiner to ask himself the question whether the varicocele is large enough to be "on the mind of the applicant."

Hernia is a condition in a recruit often considered to have either existed prior to enlistment or to have resulted from tendencies prior to enlistment. The diagnosis of tendency prior to enlistment seems to be often based, in the presence of a hernia, upon "relaxed inguinal rings," the condition of the side not showing hernia being considered to give some indication of the condition of the affected side prior to the appearance of the hernia. There are, however, a certain number of direct inguinal hernias, though more indirect ones, but it is doubtful whether there is any particular relation to relaxed inguinal rings. Very many men who have relaxed inguinal rings never develop hernias.

Rupture is common in civil life and many cases appear under what seems to be slight provocation in and out of the service. The tendencies are congenital and in not a few cases may be beyond the appreciation of the examining surgeon. If a man has been in the service for some time, say a number of years, the natural tendency, in the absence of evidence to the contrary, is to give line of duty, but if the length of service has been short, say a few months or less, the tendency is naturally in the other direction, the burden of evidence being considered on the man.

Nevertheless, there is evidence to show that a number of the cases that do appear in the service are due to faulty enlistment, to great carelessness in conducting the examination. The examiner should make every effort, at least along prescribed lines, to thoroughly satisfy himself that there is no evidence of hernia or reason to suspect one.

however incomplete it may be. Yet it must be admitted that, even when every recognized effort has been made, there are cases presenting special difficulties even to an experienced and careful examiner as the relation and condition of the abdominal contents vary as well as size of opening, making the opportunity for a hernia to recur very variable in some cases. Every medical man has had the experience of returning certain hernias without being able to elicit them again for some time, and it is well known that a number of small incomplete hernias, if promptly returned and continuously retained for a considerable period of time, may not exhibit "tendency" again under the most skillful examination.

It is well, therefore, to recognize that there are cases for which the examiner may not be held very strictly accountable. But, accountability is subordinate to the desire to do good work. Good work is not work free from mistakes, but free from avoidable mistakes. Mistakes may be due to special difficulties, but they may also be due to ignorance or carelessness. They are often due to lack of method, though in traveling recruiting parties a considerable percentage of mistakes is due to hurry to secure recruits or to get men off on certain trains.

In examining for hernia the hands of the candidate for enlistment should be extended above his head and the chin should be well up. Coughing in which the abdominal muscles are given full play thus tends to make a hernia show itself. Such coughing gives the examiner an opportunity to estimate the relaxation of the umbilical and inguinal regions, and with the index finger to secure information of the degree of relaxation of the inguinal rings and to find whether there is impulse within the canal on coughing showing tendency to formation of hernia or at least disclosing a suspicion of hernia or incomplete hernia. A suspicion of hernia under such examination is sufficient cause for rejection.

The medical officer is assisted by an enlisted man of the Hospital Corps of the Navy, who records the findings dictated by the medical officer. The hospital apprentice gives the necessary instructions to candidates to facilitate smoothness of procedure. He should be on the alert during the presence of the candidate in the office for any incident that may escape the notice of the examiner. The hospital apprentice is allowed to make the finger-print records after he has demonstrated his competence to do so. The prints are carefully examined by the medical officer in all cases. The hospital apprentice is given the care of the instruments and apparatus. He assists in the vision and hearing tests. In case of illness among the personnel

manning the recruiting station, he is detailed to act as nurse in so far as it does not interfere with the primary duty of the station, which is to secure desirable young men for the Navy.

In addition to his duty in examining applicants for enlistment the medical officer has the medical care of the officers and men of the Navy and Marine Corps and their families attached to the station and in that vicinity unless otherwise provided.

Tuberculosis is a disease that is frequently ascribed to causes prior to enlistment. There is no doubt that the statistics of the naval service show an increasing number of cases and that the actual increase has been chiefly incident to service expansion. It is therefore the appearance of the disease among the more or less recently enlisted which, together with better methods of diagnosis, has dominated the statistics so far as relative increase is concerned. Reference to the vital statistics of the Navy shows, for instance, that during the ten years (1895-1905) there was no greater percentage increase in the total deaths and discharges from tuberculosis than in the discharges from epilepsy. It might, however, be considered that if in every 100 or 200 men accepted for first enlistment a certain man had been excluded there would have been little or no increase in cases as shown by ratios. But the exclusion of that particular man presents difficulties that it is practicable to overcome only in part.

In this connection one might recall the physical examination of those known to have had pulmonary tuberculosis but said to have recovered under the influence of high altitude. In a number of those cases the physical examination by auscultation and percussion gives negative results, although the individuals may not present a picture of health, and their subsequent history in low altitudes or at sea level may show that they either had not recovered from the original disease or had retained their predisposition to it. Many of those cases still show evidence of impaired general health at the time recovery is claimed, although they may come up to all the standards prescribed in measurements by tape line and scales. The situation at the time of the examination of some of those cases prior to re-development or re-infection is not unlike that of some men who present themselves for enlistment and are accepted. It is true they do not give a history of tuberculosis, for there may be none or it may be concealed, but they either have not the appearance of good health or from their make-up they suggest the lack of a good constitution.

It has long been evident that in the examination of recruits sufficient emphasis is not placed upon those causes of rejection expressed as "feeble constitution, general poor physique, or impaired general

health," and that efforts have been confined too exclusively to the discovery of specific disease and to questions of standards in weight and dimensions of body. Regard for the general quality of material is essential for success in recruiting. A recruit should be active, have firm muscles, and be evidently vigorous and healthy at the time of enlistment. Sickly looking men may become robust in the service, but the Navy is not a sanatorium, and the records show that the good of the service requires that the chances should not be taken. Merely because no lesion can be discovered at time of examination does not excuse acceptance in view of the subsequent records of such cases in relation to tuberculosis and general physical incompetency. However, underweight in a young man has been shown by statistics to have much value as a cause of rejection.

The chest is the most important dimension of the human machine, and the long-legged, long-necked man with a short chest does not make a good recruit. The lank, slight, puny man with contracted figure should not be accepted. The voice should be strong and the chest well formed. Huskiness, the white or straw-colored skin of fine texture, fine hair, sallow appearance; soft and otherwise not well developed muscles or limbs, and often a very fair complexion give an idea of many undesirables. Deformities of a chest may interfere with the requirement for an ample chest and often interfere with an even and proper mobility. The staying power of a man is largely in his chest, as the heart and lungs are there.

No adult chest should have a circumference, precisely at the level of the nipple of less than 32 inches on forced expiration, or an expansion of less than $2\frac{1}{2}$ inches. Such minimum measurements have relation to minimum adult height (64 inches), as increases in mean circumference are prescribed as height increases. Minimum chest measurements for height demand maximum attention directed to the make-up of the recruit considered in his entirety. He must be evidently vigorous and healthy whatever the measurements may be. The ill-formed chest or the weak chest should not be accepted whatever the measurements may be. A man's chest should be considered in relation to the man as a whole and apart from the fact that disease is a cause for rejection.

There are such things as professional judgment and pride in doing good work and a desire to act for the good of the service. No number of jolts should deprive any medical officer of such conceptions, but just criticisms by his superiors in knowledge and rank should be recognized as an analytical method of arriving at certain conclusions of value, and so far as they denote carelessness or lack of knowledge

strongly indicate the direction for more determined and painstaking personal effort. An examiner, for instance, who overlooks an ankylosis, say of an elbow joint, or a marked defect in vision, or complete color-blindness, must expect to be considered careless or deficient in knowledge of clearly defined or simple tests, or lacking in a proper system of making the examination. To exclude such cases is clearly the function of the examiner in the field, and if they are not excluded it is only reasonable to hold him accountable.

From the foregoing facts in regard to the medical phases of naval recruiting it is clearly and readily seen that the recruiting surgeon, in order to get the best results from his endeavors, must combine the qualities of the capable physician, the student of human nature, the keen observer, the lawyer, and the amateur detective.

***ADENOIDS AS A FACTOR IN AMBLYOPIA.**

By CHARLES T. ADAMS, M. D., Trenton, N. J.

The accessory cavities of the nose, namely, the maxillary antrum, the frontal sinus, the ethmoid cells and the sphenoid sinus, may implicate, in their diseases, the orbit and optic nerve. This is most apt to occur in diseases emanating from the ethmoid cells, the latter being separated from the orbit by only the thin lamina papyracea, which has, moreover, sometimes, gaps in it. The most posterior ethmoid cell not infrequently extends into the small wing of the sphenoid and there comes into close relation with the optic nerve, because it now borders on the optic canal of the other side. Otherwise the wall of the optic canal is formed by the sphenoid sinus.

In the optic canal the dural sheath of the optic nerve is transformed into the periostum of the bony canal. The optic nerve is, therefore, in this situation, enveloped only by the delicate pial sheath, which, in most places, is applied to the periostum, on the upper side being actually adherent to it. This anatomical relation facilitates the direct transfer of inflammation from the cavities in the vicinity of the

* Read before the November meeting of the Section on Ophthalmology and Oto-laryngology of the Maine Medical Association.

canal to the optic nerve itself. This inflammation first effects the pial sheath of the nerve, and we should, therefore, expect that the peripheral bundle of nerves, which are next to this sheath, would be first diseased, as they supply the periphery of the retina: but the fact is that the center of the retina is as frequently effected.

The first branch of the trigeminus runs through the cavernous sinus to the superior orbital fissure, and in this part of its course lies close to the lateral surface of the body of the sphenoid. That is why it may react, under the form of neuralgia, to an inflammation of the mucous membrane of the sphenoid sinus. The influence of sinusitis as a potent factor in many eye affections is well established, illustrating the close relation of the lymph and blood supply of the nasopharynx and the eyes, and that the circulation is interfered with in children by pressure of adenoids.

A large pharyngeal tonsil acts as a plug almost as completely, in some cases, as a tampon; in many instances is accompanied by distinct changes in the retina, causing a marked hyperemia, with a disturbance of the choroidal pigment, readily discerned by the ophthalmoscope, but when the adenoids are removed in childhood, before too much damage has been effected, the eye will return to normal, and the amblyopia will, in a few weeks, disappear.

My attention to the influence of adenoids on the acuity of vision was first attracted by the result of a pharyngeal adenectomy on a 12-year-old girl. Her vision was R. 20/50 L. 20/40. Her error of refraction was a +2 diopters. She was wearing R. & L. +1.25, which did not improve her vision, had been wearing these lenses for two years, during which time, as her headaches continued, she was refracted three times, under a cycloplegic, always with the same result. Retina was hyperemic, no other pathological changes. She also complained of having *mussæ volitantes* as long as she could remember. On October 10, 1910, I removed her adenoids. On the 29th of the same month her vision was R. & L. 20/20. A year later, by her request, she was permitted to discontinue the use of correcting lenses. Her vision has continued normal and she is free from headaches.

Example second. N. H., aged 19, university student, January 10th, 1913. Has been having frequent attacks of headache and coryza, unable to apply himself to his studies; mouth breather, small faucial tonsils, spur at base of septum on the right side, septum deflected somewhat to the right, pharyngeal tonsils large. Vision R. 20/15 L. 20/25, retina hyperemic, with disturbance of the choroidal pigment. The pharyngeal tonsils were removed; the attacks of coryza were less frequent. After six months, while working hard preparing for his ex-

aminations, he complained again of headaches; he was refracted, under a cycloplegic, his vision being R. 20/20 L. 20/50 R.+50=20/10 L.+1 cy. ax. 90=20/15. He was given the following lenses, R.+25 L.+1 cy. ax. 90, which he wore for six months and then discontinued. His brother, who is a physician, stated to me recently that, from the time of the removal of the adenoids, such was the improvement in his condition, he was able to finish his collegiate course in comfort. In tabulating a series of cases, those having photophobia from any cause such as a keratitis or eczematous conjunctivitis or inherited retinitis, were not included in the list.

At the annual meeting of "The Academy of Ophthalmology and Oto-laryngology," held in Chattanooga in 1913, I reported nineteen cases. I now present twenty-six additional cases, making a total of thirty-five.

¹ Hajek in Fuch's Ophthalmology, 5th edition.

Date	Name	Age	Vis.	Date of Operation	Vis.
5/22/13	Schaffer, Kath.	10	R. 20/70 L. 20/40	12/ 3/13	R. 20/15½ L. 20/30½
11/18/13	Bateman, Gertrude	12	R. 20/30½ L. 20/30½	3/18/16	R. 20/15 (+1.25=20/15) L. 20/15 (+1.25=20/15)
1/18/14	Klemmer, Jos.	9	R. 20/80 L. 20/80	2/ 3/14	R. 20/40 L. 20/40
1/20/14	Fahey, Michael	9	R. 20/30 L. 20/30	2/ 3/14	R. 20/15 L. 20/20
2/19/14	Arlerot, Tillie	9	R. 20/30 L. 20/30	3/10/14	R. 20/20 L. 20/20
4/21/14	Taylor, Edith	7	R. 20/30 L. 20/30	5/28/14	R. 20/20 L. 20/20
3/16/14	Kimbecker, Harry		R. 20/40 L. 20/50	4/25/14	R. 20/20 L. 20/20
4/30/14	South, Tillie	11	R. 20/30 L. 20/30	11/15/14	R. 20/20 L. 20/20
4/30/14	Tabaczefski, Jose	11	R. 20/80 L. 20/80	5/26/14	R. 20/30 L. 20/40
7/ 8/14	Gilbert, Lester	10	R. 20/50 L. 20/70	8/29/14	R. 20/20 L. 20/20
12/ 6/13	Bennett, Clarence		R. 20/40 L. 20/40	3/ 5/14	R. 20/20 L. 20/20
1/ 8/14	Klemfner, Jos.		R. 20/80 L. 20/80	4/23/14	R. 20/20 L. 20/20
2/19/14	Gilbert, Tillie		R. 20/30 L. 20/30	3/10/14	R. 20/20 L. 20/20
2/26/14	Shirley, Daniel		R. 20/40 L. 20/40	3/24/14	R. 20/30 L. 20/20
5/13/13	Brown, Ralph		R. 20/30 L. 20/30	4/ 2/14	R. 20/20 L. 20/20
11/ 6/13	Popkin, David		R. 20/c L. 20/c	4/16/14	R. 20/50 (+1cy.ax.90=20/20+) L. 20/50 (+.75cy.ax.90=20/20+)
1/ 9/15	Chew, Horace	12	R. 20/70 L. 20/70	2/23/15	R. 20/20+ L. 20/20
3/11/15	Hershon.		R. 20/30 L. 20/30	4/20/15	R. 20/20 L. 20/20
3/20/15	Scott, Geo.	11	R. 20/70		

Date	Name	Age	Vis.	Date of Operation	Vis.
			L. 20/70	4/20/15	R. 20/20
4/15/15	Neal, Uling		R. fingers	5/14/15	L. 20/20
			L. fingers (15 ft.		R. 20/c
5/20/15	Wallace, Wm.	10	R. 20/30	6/14/15	L. 20/c
			L. 20/30		R. 20/20
6/11/15	Boyd, Elizabeth	13	R. 20/30	6/29/15	L. 20/20
			L. 20/30		R. 20/15
10/17/15	Dowd, Leroy	13	R. 20/30	11/13/15	L. 20/15
			L. 20/30		R. 20/20
1/27/16	Gremminger, Albert	8	R. 20/50		L. 20/20
			L. 20/50	2/24/16	R. 20/20
					L. 20/20
2/ 1/16	Brentes,	8	R. 20/70	2/14/16	R. 20/50
			L. 20/70		L. 20/30

During November the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-Official Remedies :

H. K. Mulford Company :

Mercurialized Serum-Mulford, No. 5-A and 5-B.

Mercurialized Serum-Mulford, No. 6-A and 6-B.

Swan-Myers Company :

Swan's *Bacillus Bulgaricus*.

New and Non-Official Remedies.

Swan's *Bacillus Bulgaricus*. A culture in tubes of the *Bacillus Bulgaricus*. It is designed for internal administration and for direct application to body cavities, abscesses and wounds. The culture is supplied in boxes of twelve tubes. The tubes must be kept in a cool place and must not be used after the date stamped on the package. Swan-Myers Company, Indianapolis, Ind. (Jour. A. M. A., Nov. 25, 1916, p. 1601).

BULLETIN No. 12**TWIN RESOLUTIONS**

Like twin babies may add to the higher cost of living, but they also bring a double share of blessedness.

The New Year may not find you blessed with twins, so why not adopt TWIN RESOLUTIONS?

These twins will not increase the cost of living. They will reduce it, and at the same time bring you pleasure and profit. The twins are named GIVE and GET—and are accurately described as follows:

Resolved (A):—I will GIVE THE JOURNAL of the Maine State Medical Association thoughtful care and attention, as it reaches me from month to month.

(B):—I will give to the advertisers of this Journal my preference when making purchases.

(C):—I will GIVE to the advertisements in this Journal such extended publicity as I conscientiously can.

Resolved (A):—I appreciate I shall GET from these advertisers fair dealing in every transaction I have with them.

(B):—I appreciate I shall GET from these advertisers goods which conform to the claims presented in the advertisement.

(C):—I appreciate that by my cooperation I shall GET for this Journal the support of advertisers who value the patronage of the organized medical profession.

In witness of my adoption of the foregoing TWIN RESOLUTIONS, I do hereto attach my signature, and attest my seal, on the date herein-after recorded, and do mail to the Editor this pledge of loyalty and support to my State Medical Journal.

(Not for publication)

.....M. D.

.....DateP. O.

.....State

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Editorial Comment.

Health Insurance.

No question of greater importance has come before the Medical profession of this country for years as the National Health Insurance. It will revolutionize the present practice of medicine, and it is impossible to ever predict its final results. From strictly economical standpoint, it has proven its value in the European countries. This is equally true from the point of Conservation of health as shown in Germany from 1870-1900 the average duration of life has increased for males from 38.1 to 48.8 years; for females from 42.5 to 54.9 years. As yet we have no authentic statement as to whether the medical profession was benefited or not. We do know that they are more solidly organized and are insistent in their demands for better regulations and compensation.

The American Association of Labor Legislation has drafted a tentative act which has the approval of the Committee on Social Insurance of the A. M. A. and will eventually come to Maine. As it provides that all labor earning \$100 per month and under shall come under the provisions of this act, it is time the medical profession of Maine should seriously consider this question. We earnestly urge every member of this Association to carefully study this question and suggest reading the report of the Social Insurance Committee appearing on page 1951—Vol. LXVL—No. 25 Journal, A. M. A. Many articles are appearing in various journals.

Notices.

United States Civil-Service Examination.

Deputy Collector, Inspector and Agent, Anti-Narcotic Act (Male).

JANUARY 3, 1917.

The United States Civil Service Commission announces an open competitive examination for deputy collector, inspector, and agent, under the Anti-Narcotic Act, for men only, on January 3, 1917, at the places mentioned in the list printed hereon. From the register of eligibles resulting from this examination certification will be made to fill about seventy-five vacancies in this position in the Internal Revenue Service, Treasury Department, at \$1.600 a year, with actual traveling expenses and subsistence when away from post of duty on official business, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

There is opportunity for promotion to salaries of \$5 and \$6 per diem, with allowance of \$3 per diem for subsistence and actual traveling expenses.

The duties of this position will include the supervision and inspection of the sale of opium and coca leaves and their derivatives under the provision of the Harrison Anti-Narcotic Law approved December 17, 1914, and the detection of violations thereof.

Graduation in pharmacy or medicine from a recognized institution, or the possession of a State license to practice pharmacy, is a prerequisite for consideration for this position.

Competitors will be examined in the following subjects, which will have the relative weights indicated:

WRITTEN TEST.

<i>Subjects.</i>	<i>Weights.</i>
1. Report writing (test in writing an orderly, concise, and grammatical statement, not more than 200 words in length, of the essential facts included in a given statement of 400 or 500 words)	15
2. Arithmetic (fundamental rules, common and decimal fractions, weights and measures, percentage, interest, discount, commission, customhouse business, stocks and bonds, partnership, analysis, and statement of simple accounts)	15
3. Practical questions on opium or coca leaves and their derivatives (these questions will be designed to test the applicant's professional knowledge of the identification, manufacture, and compounding of opium or coca leaves and their derivatives)	35
4. Methods of investigation (this subject is designed to test the resourcefulness of the applicant in devising methods of investigation under the Harrison Anti-Narcotic Law)	35
Total	100

A competitor who fails to attain a rating of at least 70 in each of the third and fourth subjects will be ineligible, and the other subjects of his examination will not be considered.

ORAL TEST.

An oral test will be given to determine personal characteristics of address, tact, judgment, adaptability, and general fitness for the performance of the duties of the position.

Abstracts from Current Literature.

The Therapeutic Research Committee.

By TORALD SOLLMAN, M. D.,

Journal A. M. A., Nov. 11, 1916.

This article briefly reports the accomplishments of the Research Committee of the Council on Pharmacy and Chemistry for the past four years, and incidentally explains the manner by which the work was carried out. In view of the adverse criticisms against the Council made by certain manufacturers of Proprietary Articles, detail men and some physicians, the following explanation is timely. Sollman states: The Committee from the outset adopted the policy of distributing its funds over a number of institutions which promised to take up the desired problems. Thus the work has been carried out by many (twenty or more) disinterested men, connected with institutions affording facilities for the accomplishment of this kind of undertaking.

In 1912 (1) It was shown that there is no basis whatever for the asserted differences between the "synthetic and the natural" salicylates. (2) That the current methods for estimating intestinal putrefaction are unreliable, and consequently data pertaining to "intestinal antiseptics" are of no value. Most of the data referred to probably emanate from the manufacturers of so called "intestinal antiseptics." (3) That investigators brought out the fact that attempts to explain the action of the iodios on the circulation have thus far been unsuccessful. In 1913 (1) work was done on the toxicity of the salicylates. The conclusion reached was that "toxicity and efficiency go practically hand in hand in

all salicyl compounds." (2) It was shown that trypsin is very much weakened in the presence of acid and pepsin, and that watery solutions of trypsin alone deteriorate more or less rapidly. (3) The incompatibility of HCL. pepsin and trypsin was further confirmed. (4) It was found that the use of strychnine and the ordinary doses of caffeine in low circulation does not rest on any sound basis. In 1915 it was shown that all pure American oils (petrolatum) are therapeutically equivalent to the imported brands. (2) Work was done on the synergism of opium alkaloids, morphine and scopolamin. (3) The action of veratrin. (4) The toxicity of chloroform, etc. In 1916 it was shown that (1) the hypophosphites should be discarded. (2) That sodium bicarbonate did all that any alkali could do in dissolving uric acid. Much other work was done that is not mentioned here.

In the discussion following this paper, one physician said: "I for one would rather see more constructive work done and less of the critical work," and one often hears similar remarks. Dr. Sollman answers "that the Council aims to cover the *entire* field of advertised proprietaries." There are so many worthless preparations on the market that much of the work of the Council is necessarily destructive. Another physician stated: "I believe constructive work is valuable, but destructive work is equally valuable in the drug line. We are still in the realms of superstition and if we do not wash off from our books the obsolete drugs and preparations, the same as we have these hypophosphites, then we do not accomplish very much with the larger medical fraternity."

I would strongly urge every physician to read this brief article, which contains so much of that which he should know.

R. F. C.

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PORTLAND MEDICAL CLUB.

The Annual Meeting and Banquet of the Portland Medical Club was held at the Congress Square Hotel, December 7, 1916, 63 members being present.

Before the banquet there was a short business session. The following officers were elected for the ensuing year:

President, Dr. Philip P. Thompson.

1st Vice Pres., Dr. Edwin W. Gehring.

2d Vice Pres., Dr. Harold J. Everett.

Sec. and Treas., Dr. Henry M. Swift.

Board of Censors, Dr. Bertrand F.

Dunn, Dr. Ernest W. Files, Dr.

Stanwood E. Fisher.

After the banquet the address of the retiring president, Dr. F. Y. Gilbert, was given, the subject being "Health Insurance."

The annual oration, "Medical Educational Methods," was delivered by Dr. Edwin W. Gehring. This was a comparison of plans of instruction in Germany, England and America. The greater thoroughness of the German and English methods was emphasized.

This was the 40th year of the existence of the Club, and Dr. E. E. Holt, its founder, spoke interestingly concerning its early history.

The meeting was closed by a few remarks by Dr. Philip P. Thompson, the president elect.

H. M. SWIFT, *Secretary.*

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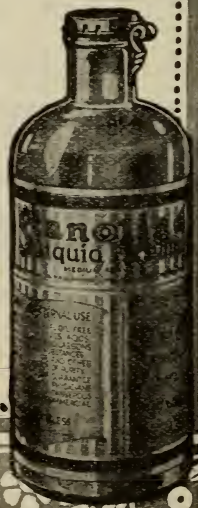
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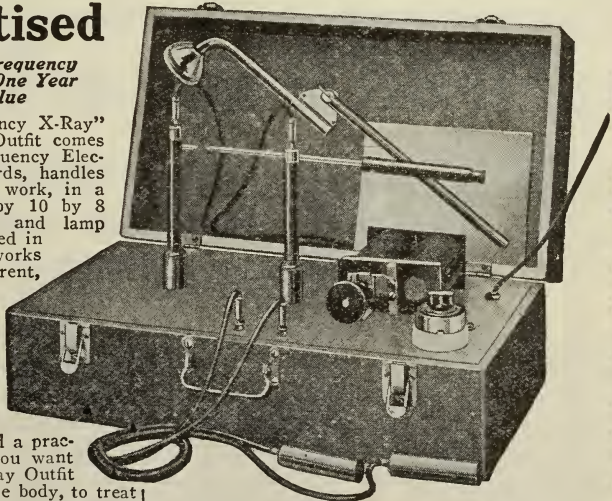
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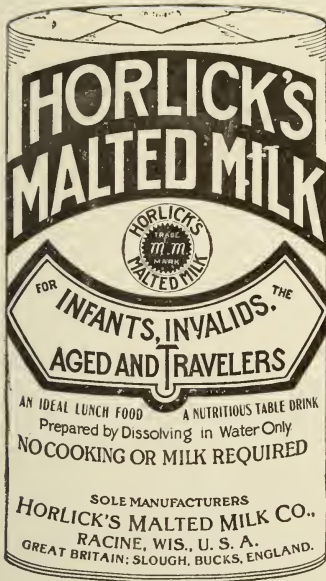
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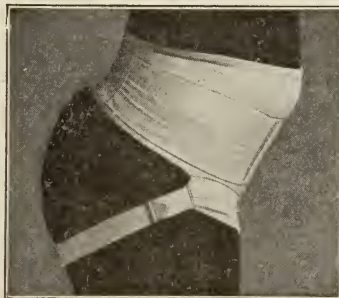
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TABLE OF CONTENTS

Original Articles—

Eclampsia and Misfit Labor: Their Modern Management.....	173
Medical Inertia and a Vacation.....	189
Medical Legislation.....	197

Editorial Comment—

Health Insurance.....	200
New Year Resolutions.....	201

Medical Defence.....	201
Hypochlorite of Soda Wound Infec- tion Treatment in France of To-day	202

Miscellaneous—

Personal News and Notes.....	199
County News and Notes.....	204

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No. 6

***ECLAMPSIA AND MISFIT LABOR: THEIR MODERN MANAGEMENT.**

By STANLEY P. WARREN, M. D., PORTLAND, MAINE.

Obstetrician to the Maine General Hospital, and to the Webber Hospital,
Biddeford, Maine.

There are conditions, chiefly mechanical and common to both these emergencies of pregnancy, eclampsia and misfit labor, which under the older style of treatment caused a large fetal mortality. In the development of obstetrics a way has been found to overcome these disabilities, which gives the child a fighting chance for its life. That way is an elective celiohysterotomy instead of a compulsory vaginal delivery. By widening the scope of abdominal Cesarean section beyond its former classical limitations, the child of an eclamptic or deformed mother may be saved by laparotomy, though it would almost certainly be lost in extraction through the natural birth canal. A lengthening experience with this modern management of this class of cases encourages me to submit this paper for your consideration.

I. OF ECLAMPSIA.

Eclampsia is still a conundrum. In spite of the study spent upon it during the last five years the ultimate cause is still unknown. Clinical and experimental facts are, however, narrowing the field of speculation, and its practical management is becoming less empirical. The etiology of the disease, most favored to-day, may be outlined as follows:

* Read before the 64th session of the Maine Medical Association at Portland, Me., June 8, 1916.

Eclampsia is the climax of the toxemia of pregnancy. "This toxemia," says Rongy, "is invariably due to a disturbed metabolism, or, more correctly, to a loss of metabolic equilibrium in the mother, produced by some foreign substance originating in the fetus or placenta." The organs which form the toxins are the liver, placenta and intestines. Toxemia does not account for all eclampsias, but is by far the most frequent cause. The toxin theory is strengthened by the clinical fact that convulsions, the salient feature of eclampsia, usually stop when the fetus, the source of the toxemia, is taken away. With a dead fetus and therefore arrest of placental activity, eclampsia is unlikely, though toxemia may continue. That anaphylaxis causes eclampsia is not accepted at present. The modern radical treatment of eclampsia is based upon the proposition that as eclampsia is due probably to toxemia, and the cause of the toxemia is certainly pregnancy, therefore to stop the eclampsia stop the pregnancy.

Eclampsia increases in frequency as gestation lengthens. It occurs as early as the tenth week (DeLee), but is more common after viability and most common at term. It happens about once in six hundred pregnancies, about thrice in primiparæ to once in multiparæ. Twenty per cent. of cases are antepartum, sixty per cent. intrapartum, and twenty per cent. postpartum. It is most frequent in neurotic women. The maternal mortality is about twenty per cent.,—greatest during pregnancy, less during labor, and least during the puerperium. The fetal mortality is from thirty to forty-two per cent. These figures vary with location and treatment, but show eclampsia to be one of the gravest of obstetrical diseases. "If the toxin theory is proven," writes DeLee, "the toxins irritate the nerve centers as do other specific poisons, strychnine, tetanus, etc. But the toxin of eclampsia has a special affinity for the cortex of the forepart of the brain [sensory portion], as is shown by the constancy of convulsions, coma, and the mental symptoms." Hence the argument for morphine.

The symptoms of eclampsia will be considered, at present, only as they characterize the more common type of the disease. The rarer, fulminating cases have practically no omens; they come like lightning out of a clear sky, without warning. Ordinarily eclampsia is an end-process of former conditions, present for days or weeks, that are now grouped together under the name "pre-eclampsia". The practitioner may have failed to heed these symptoms of disaster, either through inexperience, the distractions of daily practice, etc., or may have had no opportunity to do so because not called until the actual attack. But generally the pre-eclamptic state develops along a well-defined course, more significant and prophetic from day to day. For the purposes of

this paper allow me to recall its details to you, in their usual, though not invariable sequence.

The initial subjective symptom is commonly a persistent swelling of the feet and legs, then of the face; next are noticed changes in the quantity and character of the urine. Headache is sometimes an early, perhaps a later, symptom, often occipital, less often one-sided like that from a sudden blow. Later still are nausea and failure of digestion, even vomiting, which in the last weeks of pregnancy is nearly always toxic. Disturbances of sight, from cloudiness to total blindness, appear later still, though I have noticed loss of vision as early as the twelfth week. Various neuroses are terminal conditions, and usually increasing blood pressure. A very common and reliable symptom of approaching convulsions is epigastric pain, the attack following it almost certainly within forty-eight hours.

The most important objective symptom of pre-eclampsia is increasing albuminuria, the urine growing scanty, of high specific gravity, and loaded with casts of all kinds. Bloody urine, drawn by catheter, indicates the degree of nephritic congestion and warrants the gravest prognosis. Eclampsia without albuminuria is peculiar to the fulminating type. A rising systolic blood pressure, from the normal 135^{mm}, is also an important danger signal.

My only excuse for recalling to you these elementary facts of pre-eclampsia is to emphasize their importance when grouped together, not in detail. If a woman in the last weeks of gestation has swollen legs and face, headache, gastric disturbance, loss of sight, and epigastric pain, convulsions may be expected. These are the five great danger signals, and are sufficient warnings even without urinalysis and the sphygmomanometer.

The medical and dietetic treatment of this symptom-complex is now well established, and if it fails the uterus should be emptied. The management of eclampsia itself, after viability, depends in great measure upon the physician's familiarity with it, his environment, and much upon his attitude of mind towards the two modern styles of practice, radical and operative, or conservative and therapeutic. There is little question that, in the ordinary country practice, the conservative plan is the better. A prerequisite to success is a good nurse, who will carry out her directions without fear or favor of the family. The toxemia will be fought by catharsis, especially calomel, lavage of the bowels with salt or sugar solution or the Murphy drip, the wet or dry body pack, venesection (which is returning to favor), sedatives like chloral, the bromides, or veratrum viride. Nearly all practitioners believe that if labor is present, it should be assisted. Personally I do not

use morphine in eclampsia, for reasons which will appear later. The Strogonoff, or sedation method, has advantages for the solitary physician, and, with the omission of morphine, under such restriction I have no hesitation in advising it. But just here I suggest that almost every physician, wherever his station, is now within a comparatively short distance from some reliable hospital, to which his patient can be carried, by train or automobile, safely and quickly. I have done this several times without adding to the gravity of the situation. For I am confident that the mortality of this most treacherous disease, eclampsia, is least with the skilled surgeon and trained nurse. The eclamptic is peculiarly a hospital patient, and the conditions must be very exceptional which forbid it.

The present American treatment of eclampsia is either by temporizing with delivery secondary, or delivery first and treatment secondary. For the last fifty years the shuttle of practice has swung from one of these extremes to the other. Latterly, owing to the closer interweaving of obstetrics and surgery, the operative method seems most popular. For the sooner the accoucheur forgets to be simply a midwife, and realizes that, under the changed conditions of women due to modern civilization, he must accept the responsibilities of the surgeon, the quicker will he adopt the radical method. The fetus is a foreign body, and as such is to be gotten rid of, *tuto, tuto* and *secundem artem*. The time for temporizing with eclampsia ended with the failure of prophylaxis. The sedation treatment, and its varieties, is a makeshift, a going back to the empiricism of the fathers, and modern obstetrics offers better things. It is true, morphine obtunds the nerve centers, and is useful in heart shock, but it is treating the convulsions and not its cause, the toxemia. The patient dies not from the convulsions but from the toxins. Dr. E. P. Davis is right in saying, "It is not the eclamptic convulsion which is the prime source of danger, but the toxemic state."

Taking all things into consideration, I agree with most American obstetricians that the main object in the management of eclampsia, after viability, should be delivery. My opponents concede, I believe, that with labor in progress it is right to assist it. The crux of the situation is when the birth canal is unprepared for delivery, as in primiparæ with unshortened cervix and undilated os, and medication has failed to stop the convulsions. In such cases my first choice of operation would be an abdominal Cesarean. Believing, as I do, that the reason for the eclampsia is the fetus, it is the safest and quickest treatment of these unready cases, and decidedly better than a difficult accouchment forcé. The Cesarean is usually contraindicated after re-

peated vaginal examinations or in general infection, and here we may properly temporize. The membranes should be ruptured and dilatation hastened manually, or by a Vorhees bag or Cook's sink. We are told that labor is usually, or often, spontaneous with eclampsia, as a result of the general muscular action. In my experience this rule is academic, and an unsafe guide for practice; convulsions may continue for hours without labor, certainly before and even at term. Forcible dilatation of the unshortened cervix and immediate extraction, the true accouchment forcé, has the highest maternal mortality of any method of treatment. After delivery there is no disagreement as to the value of elimination, as previously outlined.

Illustrative cases of this plan of management of eclampsia could be given; I shall offer but one. A medium sized primipara, twenty-one years old, at the seventh month, had convulsions all night, and had been given three-quarters of a grain of morphine before entering my service at the Maine General Hospital. She had three bad fits after entrance, the last requiring artificial respiration. She was in deep coma, cyanotic, the pulse full and rapid. The urine was solid with albumen, 1040₀ sp. gr., and loaded with casts of all kinds. She was bled from the arm forty-four ounces, and taken to the amphitheater. The vagina was rigid, the cervix unshortened and undilated, and there was a cephalic presentation. An abdominal Cesarean was quickly made, and a small living child delivered. After return to the ward the Murphy drip and active cathartics were used, but convulsions continued for several hours, and finally stopped after an enema of forty grains of potassium bromide. During the next twenty-four hours her bowels moved freely, she passed ninety-six ounces of urine, and thereafter convalescence was undisturbed. She went home on the twelfth day, and has since been well.

II. OF MISFIT LABOR.

Is it a misfit, and how shall it be managed? The answer to either question is much easier nowadays than in the olden time, when the usual solution of these mischances of childbirth was the forceps or craniotomy. The causes of dystocia, when due to lack of accommodation of the passage for the passenger, are better known, and the up-to-date obstetrician treats it by elective rather than compulsory methods. The fatalities of dystocia, also, are lessening as brains are supplanting muscle. The days of high forceps, craniotomy, and compulsory version, those last resorts of the fathers, are passing by. The solution of the problems of labor is changing, just as the process itself is changing under the influences of modern life upon the woman and

child. Childbirth is no longer a natural function but a surgical operation. The old type of midwife, whose professional stock in trade was limited to pulling on the perineum and tying the cord, is fast disappearing. In her place the poor are accepting more and more the public maternity and the services of the follow-up nurse. Even among the wealthy it is becoming a fad to be confined in a lying-in hospital. But with all these modern advances, seventy-five per cent. of the gynecologist's work is said to be due to the wear and tear of parturition. "The failure of medical men to agree on a higher standard of obstetrical service and higher remuneration," writes Gelhorn in the *Lancet*, "has helped to confirm in the minds of the public the belief that parturition is a more or less negligible condition. As a result, hospitals are filled with women, and most of the operations are done to correct disorders, which in their last analysis are due to failures of obstetrics." Popular ideas about labor are still too much those of the dark ages. To be sure there is a growing class of women, as witness the recent propaganda for "twilight sleep," who are learning that obstetrics is an art not a trade, and that the price of human life is not based on a fixed tariff. The bargain-counter delivery is always dear at any price. Midwifery is certainly one of the most important offices of the physician, but only the very poor or the very rich can command the skill of the specialist. The large proportion of confinements are attended by the midwife or general practitioner. The latter grudges the time he has to give to them, growls over the wage he gets for them, and is blamed for the defeats he meets in them. Is it surprising that, under the circumstances, his back aches under the burden?

The obligations of the modern obstetrician to his patient are not restricted simply to the period of delivery. His attitude throughout the entire gestation is, or should be, one of watchful waiting, of preparedness for any and all emergencies, so that, as occasion arises, he may not be found wanting. Thus knowing his patient, her physical and mental resources for the supreme day of trial, he is ready to answer my first questions, "Is this to be a normal or misfit labor?"

We hear much in these days of pelvimetry; of diameters measured to the fraction of an inch. But to stop here is to see only one side of the shield. The capacity of the human pelvis is practically the same the world over, be it in white or black, rich or poor, civilized or barbarian. It has fixed limitations of rigid, bony walls, adapted, as we say, for a normal sized passenger. "In great things, as in small," says Owen Wister, "we hide behind phrases; changing the *words* satisfies us just as well as if we thereby changed the *facts*." What is the "normal size" of the fetus at term? That depends upon whether we

are considering the class or individual. We know the individual has endless variations from the standard, according to race, heredity, parental station in life, and even from his, or her, brothers and sisters. A small child may follow a large one, and vice versa. Her pelvis admits one kindly; it refuses absolutely the other. The fact is too common to require demonstration. The problem, then, at labor is a double one; does the pelvis conform to the standard, and second, does this presenting child weigh six pounds or sixteen? The pelvimeter is a useful instrument in so far as it sketches for us the interior of the pelvis. To complete the picture, we should know the dimensions of the passenger; the one is of little value without the other. I venture to offer some simple rules, which have helped me in these problems.

First, of the pelvic capacity. Here it must be remembered, once for all, that each woman is a law unto herself. We may assume, ordinarily, that the birth canal of the multipara is more roomy after her first labor; the pelvic joints and soft parts have permanently stretched, and there is also the clinical history of former deliveries to teach its capacity. In multiparæ the problem of mutual fitness depends more upon the size of the passenger and less upon that of the passage. But in primiparæ, lacking a previous trial to help us, both are equally desirable. Here now comes in the value of pelvimetry. The old rule still holds good; if the external conjugate measures eight inches or more, the true conjugate may be considered normal; if seven inches, it is probably shortened; if six inches, it certainly is. Again, if the promontory cannot be touched by the middle finger, *per vaginam*, the true conjugate is generally normal. This is as far as the general practitioner needs to go with pelvimetry, in ordinary cases. It should be remembered, however, that slight degrees of pelvic contraction are more common in the higher class of American women than once thought, a fact that may help to account for the greater number of malpositions and operative labors to-day.

Second, of the passenger. Up to the present time, it is impossible to accurately measure the fetus, *in utero*. But its approximate size, which is all that is generally desired, is suggested indirectly by the clinical history of former labors, and directly by abdominal and vaginal examination. In multiparæ, as has been said, former dystocia is prophetic of a misfit in succeeding labors. Malpositions, difficult forceps extractions and versions, and stillborn children carry their own warning. Abdominal palpation in primiparæ tells us much about the bulk of the fetus. For instance, an unusually large abdomen at term is more than suggestive of a large child. If the uterine tumor is firm to the touch, with fetal parts readily distinguished, and there are strong

fetal movements and heart sounds, a large child and scanty liquor amnii may be expected. Again, the abdominal girth of the primipara, at term, should be about thirty-six inches, and the vertical length of the uterine ovoid thirteen inches. Any decided increase above these indicates a large child. Malpositions, and, I think, occiput posteriors, mean fetal disproportion. The Müller method for determining the fitness of the presenting part for the brim is of some practical value, though it has distinct limitations and requires anæsthesia. Furthermore, a floating or unengaged head under good contractions means unfitness; either a massive child, a compound presentation, etc. But if a trial labor shows that, though the child is certainly large, its parietal diameter has passed well down into the brim, there will probably be sufficient moulding for successful delivery, but help may be needed.

III. HOW SHALL A MISFIT LABOR BE MANAGED?

With a certain or probable misfit *before labor*, the method of delivery in primiparæ should be elective; in multiparæ should depend upon a trial labor. In multiparæ after several, perhaps six, hours of good contractions if there is little engagement or moulding, and there is besides a similar history in previous labors, then there are four alternative modes of delivery: first, temporizing and forceps, with usually high fetal mortality; second, podalic version, probably fatal to the child; third, craniotomy, contraindicated on the living child, and fourth abdominal Cesarean section. Under the assumed condition, I have no hesitation in choosing the Cesarean.

With a misfit in a primipara, as has been said, the mode of delivery should be elective. Premature delivery through the vagina has a large fetal mortality, even with experts. Instead of a trial labor or an hazardous operative delivery from below at term, the parents should be urged to accept, a few days before term, an abdominal Cesarean. The elective Cesarean, made by an experienced operator, is practically safe for the mother and a living child can be almost guaranteed. If the physician in attendance cannot do the operation, it is his duty to call someone who can. In a misfit labor after frequent vaginal examinations and attempts at delivery, an abdominal Cesarean is questionable, as a rule, because it has been demonstrated that its morbidity and mortality is directly in proportion to the number of such examinations. With an infected birth canal, that method of pelvic delivery should be chosen which is least likely to injure the mother, forceps rather than version, for illustration. Under such an emergency the mother's interests are paramount; the child must take its own chances. If the Cesarean is refused by the parents, after its merits and demerits have

been honestly set forth, then the burden of the fate of the child rests upon them, not the operator.

I am pleading for a more general adoption, by the practitioners of this State, of abdominal Cesarean section, celiohysterotomy, in eclampsia and misfit labor. The modern operation is widely different from that of the fathers. The old objections to it, that it was a last resort, was restricted to absolute pelvic indications, was the child's operation not the mother's, that it should never be made if the child was dead, and has a high maternal mortality, all these are as antiquated now as "milk fever." As a popular writer says, "the Cesarean operation is the safest way to solve complicated obstetric problems, and is done entirely too often, both for insufficient indications and inappropriate cases. On the other hand, it is not done often enough, and many mothers are sacrificed by brutal and unscientific attempts at delivery from below." (DeLee.) I am not advising *vaginal* Cesarean section for the general practitioner; it is much more difficult than the abdominal method, and is losing favor even among experts. The excuse for the physician in the lying-in-room is a living child; he has neither the moral right to choose, nor can he expect professional countenance in adopting a mode of delivery that will almost certainly kill or maim the child for one that will almost surely save it.

Celiohysterotomy itself it not technically difficult, nor restricted to the professional surgeon nor hospital. It has been done successfully many times by the general practitioner in the tenements. It is within the ability of any physician with a cool head and the surgical sense. The operation demands the closest attention to modern surgical technique, good assistants and nurses. The eyes are better instructors than books, and the beginner with a Cesarean will have more chances for success, and more confidence in himself, if he can have witnessed it made by an expert. In my opinion, there is only one valid objection to an abdominal Cesarean; "once a section, always a section." The risk of rupture of a uterine cicatrix in a succeeding labor is great, and should not be permitted. But there seems to be no limit to the number of times a Cesarean can be repeated on the same woman. I have myself done it twice successfully on four separate patients, and others report four, five and six repetitions.

I can illustrate this topic of misfit labor by two short examples. A middle-aged multipara had five deliveries, all, except the first, which was instrumental, easily and normally. I was called to the sixth labor after it was well in progress. She excused the delay in sending by saying that she always had her children quickly, and did not wish to detain me. I found a fourth cephalic position, the head well engaged

but not advancing. After reasonable waiting I failed to extract with the Tarnier's. It took the utmost strength of myself and assistant an hour to deliver the head, and nearly another hour to extract the body. The child was stillborn, of course, and weighed within three ounces of sixteen pounds. My mistake was in not knowing the size of the child before attempting delivery, and it should have been born by a Cesarean.

A young woman had her first child delivered by a long, bloody forceps operation, during which the forceps were broken in the passage, and the canal badly torn. The child was stillborn, and was said to have weighed over ten pounds. She is almost a dwarf, four feet and seven inches tall, weighs less than one hundred pounds, and all her external pelvic diameters are an inch short. As is often the lot of such women, the husband is a large man, weighing nearly two hundred. Her abdominal girth at term was forty-two inches, and the vertical length of the uterus seventeen inches. The fetus was strong and active, and certainly large. She dreaded another vaginal delivery, and was very anxious for a living child. I did an abdominal Cesarean, four days before term, which resulted in the birth of a vigorous, healthy girl, weighing eight pounds. Convalescence and lactation were normal, and she has since been well.

PRESIDENT HOLT: The discussion of this important paper will be opened by Dr. G. H. Coombs, of Waldoboro.

DR. COOMBS: Mr. President, and Members of the Maine Medical Association: My experience in eclampsia is that of the country doctor, and is therefore limited. When Dr. Warren wrote me with reference to this discussion, it struck me at first that I had seen a good many cases; but, upon going over my history, I find that in a matter of thirty years' work I have had the care, either alone or with consultants, of but ten cases of eclampsia. Three of these occurred in the practice of other physicians, in which it was my privilege to help them. It has been my privilege to care for six women in eclampsia at term. Three mothers and children were saved, one mother and child lost, and two children lost, the mothers being saved. This appears to me, in looking back upon it, as a greater child mortality than is necessary; but a portion of the work was done under conditions which all country doctors are obliged to face.

Dr. Warren's bringing up the question of Cesarean section in eclampsia at term seems to me very timely for this Association. The question is as to when Cesarean section is advisable. In most of the cases of eclampsia at term, labor has already begun, and ordinarily it appears better to the physician in attendance to dilate gently and rapidly, and deliver the child by version. The question of Cesarean section brings up the further question: What is the future of the eclamptic patient who has a Cesarean section? At the termination of her lactation period she is still liable to become pregnant, she is subject to the danger of rupture of the scar, I believe, in her next pregnancy, and she must in a subsequent pregnancy have Cesarean section performed.

Dr. Warren's paper, which I presume will be published in full, refers to the matter of misfit labor and of any physician being able to perform Cesarean

section. It seems to me that in this he goes too far. Dr. Warren qualifies this by stating that all that is necessary is a condition of asepsis, the carrying out of aseptic surgery, and sufficient nurses and other medical assistance. These cannot be had in country practice, and it seems to me that it is an unsafe thing to recommend to the ordinary country doctor that he shall do a Cesarean section. I speak of this because it seems to me that it cannot safely be done.

As a measure of prophylaxis, I wish to speak of one thing that has appeared very prominently in my work with women who are about to have children, and I believe—I hope—that I have prevented a number from having eclampsia. I have shut off the symptoms by timely attention to the fact that they were living in new homes that had just been painted. It seems to me that if there is any one thing which tends to bring on kidney symptoms in a pregnant woman, it is the fumes of turpentine in the home where they live. Three of these ten eclampsia patients had lived in houses just painted, or had helped to paint the rooms in which they slept, and one of them, who was brought up in the South, took, in order to hasten her labor, which was a little tardy in appearing, two tablespoonfuls of turpentine, and she promptly had eclampsia. It is my custom, where I am sought for advice by a pregnant woman, to insist upon it that there shall be no painting inside or outside of the house in which they live.

It seems to me that the term "accouchement forcé" is an unhappy term. It carries with it the idea that *force* is to be used—too much force. I believe that the ordinary practitioner under stress of the care and treatment of eclampsia in the country, perhaps on an island without assistance, is inclined to use too much force in dilating the cervix. If he takes a little more time, his results will be more happy. It was my privilege to take care of one young woman who had helped her husband paint the inside of their new home, and who developed eclampsia at the end of the seventh month. I saw her in consultation with another physician, and her condition was very bad. There was an obliteration of the cervix. They lived far in the country where expert help could not be reached. A dilatation was begun very carefully by the attending physician and myself, until finally, at the end of three hours, we were able to get complete dilatation, but a dead child. It seems to me that we are apt to be too lax in advising pregnant women to keep themselves under observation of the doctor who is to take care of them when they are confined, and, if we look after that end of the line more carefully, there will be fewer motherless children from this cause.

DR. P. W. DAVIS: Mr. President and Gentlemen: It is my privilege to discuss this paper from the surgical standpoint, and right here I wish to state that it seems to me that medicine has very little to do with the discussion of this subject. I wish to emphasize a statement which I made several years ago in a paper read in this room, and that is, that normal labor asks no aid from medicine or surgery. Distortion and complicated labor changes the complexion of affairs, and the problem then becomes a surgical one. As Dr. Warren says, the modern accoucheur must be a skilled surgeon. To successfully deal with eclampsia and the various possible complications of labor, the very highest surgical skill is essential, and I wish to repeat that in so far as the obstetrician has to deal with normal labor, he needs no help from medicine or surgery. With difficult labor, as I said before, the problem becomes a surgical one.

Now as to eclampsia. As the paper points out, this complication is fortunately a rather rare one, occurring perhaps once in six hundred pregnancies.

Dr. Warren terms it one of the gravest of obstetric diseases. It is indeed grave; but eclampsia is probably not a disease entity. It is a symptom, a very dramatic expression of something radically wrong with the woman. Just what is wrong we cannot say. In these latter days there has been a great effort to answer this question, but until we have more light upon the matter, eclampsia, when it comes, comes as a surprise—a very dangerous complication of labor. I do not wish to minimize the good effect of supervision of the woman, of examination of the urine, and the taking of the blood pressure. Every pregnant woman, whether we are suspicious of trouble or not, should have all this supervision and have all these things done. I simply wish to state that after all, at present, if a woman escapes eclampsia, we do not know whether it is by Divine Providence or our own efforts.

Dr. Warren has detailed a so-called pre-eclamptic state, and we are told when a certain set of symptoms are in evidence that we may expect eclampsia; but we all know that the very gravest form of eclampsia, fulminating eclampsia, occurs without the symptoms, and that a very grave combination of these symptoms is by no means always followed by eclampsia. In eclampsia, I believe that it is never safe to rely on the Stroganoff method. I may be unduly prejudiced in that I lost a very dear relative from the carrying out of this very method within twenty-four hours after the attack of eclampsia began. I believe that the value of morphine in eclampsia is solely in its conservation of the patient's energy and in its effect on blocking of shock. If medicine is of any value, there is only one, and that is morphine, which has any value, I think, in acute eclampsia. However, if there is any operative procedure to be done, if a Cesarean section is to be performed, or the woman is to be taxed in any way by interference, I think morphine should be administered, as in any other surgical operation, in sufficient quantities to block the shock. I believe the day may come when transfusion and simultaneous bleeding will be a life-saving measure in this grave condition. Dr. Crile, I think, reports two cases of women in eclampsia treated by this method, and both treated successfully.

I will not discuss the rest of the paper, misfit labor, as it has not been read. I thank you, gentlemen.

DR. LEIGHTON: Mr. President: What few remarks I have to offer will occupy but a few moments. I want to speak of the conservative treatment of eclampsia, incorporating in my remarks a few words in favor of the so-called "morphine treatment" of that disease.

The trend today in the treatment of eclampsia is towards conservatism, I am glad to say. The leading obstetricians of the world are slowly but surely getting away from the harsh, immediate operative treatment of this malady, and the conservatism of thirty, forty and fifty years ago is showing its worth. The results show that conservatism in eclamptic treatment is the rational thing.

To state that the fetus in utero is the actual cause of eclampsia is absolutely wrong. If the man who makes this statement could prove it, his reputation would be made! The fetus is the predisposing cause; almost anyone will agree to that. You never heard of a woman having eclampsia if she were not pregnant. The actual exciting cause of eclampsia is something else within—a poison, a toxemia due to faulty metabolism and elimination. Personally, I think that it is *food*, but you are not interested in my theories.

The one pre-eclamptic sign or symptom of extreme value, and of which Dr.

Warren made mention, is the epigastric pain. It is an important symptom. It means that actual eclampsia will shortly occur.

There is no absolute demand for hurry in delivering the eclamptic. Most of us want to be doing something, or think we must do something, so we carry out the empirical treatment of immediately evacuating the uterus, once we are brought face to face with this disease. There is no necessity for being in a hurry and killing the woman. I will agree that the sooner the child is born, the better, for one thing, that we may have a live baby, because the longer the child remains undelivered, the more the probability that the eclamptic poison will kill it. But as a curative measure immediate removal of the child amounts to nothing. To add lengthy cervical dilatation and rapid delivery will entail such shock to the already poisoned irritated nervous system that the chances for a dead mother are infinitely greater. If you have a woman near full term with severe pre-eclamptic symptoms, induce labor. That is good treatment. If a woman, we will say a multipara, has intrapartum eclampsia and has a dilated, dilatable cervix with some cephalic fixation, all well and good, aid her in her delivery. But to take a woman with a tightly closed cervix, a rigid one, and to dilate her with instrumental and manual means, followed by extraction, is pretty near murder!

The treatment of eclampsia is not always surgical by any means. It is, and should be, medical. You can keep busy enough! Use morphine and elimination to combat the disease. I should put it the other way, elimination and morphine. Elimination means irrigation, lavage and every other means that is available. Croton oil, salts, castor oil or any efficient cathartic through the stomach tube combined with colonic irrigation. Then give her morphine, and enough of it to control the fits. The trouble is you are scared of morphine; that is why some of you say you can't control the fits. You don't give her enough. Dr. Gordon, Dr. Donovan, and some of the other older men, know that it is good and they know that it works!

There are those fulminating cases where this conservatism does not fit in. There is the excuse for Cesarean section. But remember this, conservatism is the keynote of the treatment for eclampsia, and the sooner we all realize this point, the better off we will be, and the patients to whom we are called!

DR. TWITCHELL: Mr. President, I did not intend to say anything about this paper, but I am one of those practitioners who has had experience in the country as well as in the city. I look with some commiseration on my friends, like Dr. Thompson, who have spent all of their lives in the city, although, with increasing age and experience, he has become a gentleman farmer, with a good deal of emphasis on the "gentleman". Therefore, possibly he may now get the experience that both the country man and the town man have.

Now we are dealing with a condition and not with a theory. It is one thing to treat a patient in the hospital, or a patient who is in a large city, with all the modern conveniences at her command. It is another thing to treat these cases as we find them in the isolated districts of the country. We cannot treat our patients as subjects, the way the Germans treat them. We have got to treat them as individuals. We have got to treat them as our neighbors and as our friends, and that element comes into the question of treatment. Now I believe that in discussing a thing of this kind we should be specific. I agree very heartily with the most that Dr. Leighton has just said, because he speaks with the courage of his convictions, and tells what we should do. Now what would I do if I were called to a case of eclampsia in the country? I think

the first thing I would do would be to bleed the patient up to more than a pint. Then I would give a half grain of morphine. Then I would start the irrigation of the bowels, which I think is extremely important. I would try and get into the stomach seven grains of calomel and fifteen of bi-carbonate of soda. Then I would consider whether best to go on with the labor or not if the child was viable. There is no reason why labor should not be induced if it can be comfortably; but I do not believe in very forcible delivery, unless it is one of those cases that we cannot control by more conservative methods, and in primipara. Of course there are cases where Cesarean section, it seems to me, is the thing to do; but if the child is not viable, and it is along the fifth or sixth month, I would not wait a great while without inducing labor, perhaps by introducing a sterile bougie into the uterus. But, if the case seemed amenable to medical treatment, I should want to temporize a little and not destroy the child unnecessarily. I believe that every practitioner should have in mind what course he is going to pursue when a case confronts him. In a case of eclampsia we cannot stop to consider what it is best to do; we have no time then to get hold of our books and read them. We should have a definite plan in view to follow.

DR. PORTER: Mr. President, I am one of the country physicians. I have been in practice in the country for a number of years, and I was wondering why it was different with me than with Dr. Warren as to the frequency of these cases. He says it is rare; that it occurs once in about six hundred cases. Out of about seven hundred cases I have seen nine cases of eclampsia. That is a little more frequent. I do not know whether I was to blame or not. Four of them were my own, and five of them I was with other physicians to assist them. In those nine cases there were two fatal cases of the mother, and I think three or four fatal cases with the children. This is something that I dread more than all the other cases I have to handle, and so far I have felt that it was my duty to deliver them as soon as possible when they were at term, and I have done so; yet of late years I have read of a more conservative method, and I feel like following that.

As to the matter of venesection, if the woman is plethoric and full-blooded, I believe in venesection—bleeding; but if the woman is anemic, and not full-blooded, I prefer to let it alone. I have seen good results from giving chloral, and I remember the first case I ever saw with another physician. She had had a severe convulsion, and he had drawn a large amount of blood from the arm, gave her a good dose of chloral, and spontaneous labor came on. She was delivered within two hours without any effort and the woman and child lived. The thought that occurred to me was, did I have more than my proportion of them, or have they got the figures too low. I do remember of one physician who said he had practiced twelve years and never had seen a case of eclampsia. When I had been in practice three years I had had four. That was my bad luck.

DR. GORDON: Mr. Chairman: My obstetrical practice went out just seven years ago this month. I saw the baby for the first time two days ago since I delivered her. She is a beautiful child, but it was one of the hardest labors I ever had. I mean by that that it was the most difficult labor that I have encountered that I finally terminated safely. I happened to be away in court at Portsmouth, New Hampshire, at that time when the patient was taken, and Dr. Moore was called to the case the day before my case terminated in Portsmouth. I came home and found him still engaged in the labor, and for about four or five hours he and I had all the pulling that we wanted. However, we delivered

a beautiful baby, the mother got along all right, and the child is a beautiful child today. That is my last baby that I have ever delivered. I think I can say, perhaps, what very few men can say, and that is, that I have had but two cases of eclampsia in my own practice in more than forty-five years of practice. I have had several cases in consultation, but only two cases occurred in my own practice. One occurred during the first three months of my practice. The woman had forty-four convulsions consecutively without the interruption of an hour between. In those days we did not know much about the modern methods, and I let her have her own course. Occasionally I gave her a little ether to satisfy the attendants—the audience. At the end of a month she delivered, of course, a macerated fetus. I then thought in my first experience that it was generally better to let them alone. Later on, in a few cases where I was called in consultation, I at once delivered. I believe that in a good many of those cases now Cesarean section is absolutely the best thing, if you have a competent man to do it. I think I made the first Cesarean section that was ever made in this State, with one exception, and that was old Dr. Gilman, who quite a good many years ago made a Cesarean section on a woman twice. That was considered a miracle, almost, in this State. After that a great many years elapsed, and I think I made the first Cesarean section after that. I believe that I for a time had the record of Cesarean sections. I think now Dr. Warren has it. I have no question that Cesarean section in a certain class of cases, where there is no attempt at dilatation, and where you have an exceedingly rigid cervix, is necessary, and I believe that it is better not to delay too long. Cesarean section is a simple operation if done properly, and I have no doubt it will be done more in the future than in the past. My obstetrical experience has ended unless I am caught in an emergency.

DR. THOMPSON: Mr. President, it seems to me there is a fairly substantial agreement by everybody here as to what should be done. Dr. Leighton advocates an operation under certain conditions, and Dr. Warren advocates it under certain conditions. I cannot speak for myself, because I have one lone obstetrical case a year at the outside. My own feeling is that there is room for all those methods of treatment. A certain type of cases may be treated by the Stroganoff plan, and be sufficient to save the woman, and perhaps the child as well; but with certain fulminating cases, in which the death of the patient seems to be imminent, where the os is rigid, and where elimination cannot be procured on account of the lack of response in the woman's organs, Cesarean section is the better method of treatment. It seems to me that is reasonable, and that there will be certain surgical cases for Cesarean section; but the number will be limited. They have been doing Cesarean section for eclampsia long enough now so there should be some statistics; but I do not know what they are. I have not been interested in them particularly; but I have a sort of an idea from casual reading on obstetrics that the field for Cesarean section in eclampsia is more limited now than it was two years ago. I will say that the old morphine plan and elimination, so far as it may be carried out, the conservative plan, so called, is one which is practiced more generally now than the other. Of course there are certain limitations which always exist for the Cesarean section. It is no use to talk about the Cesarean section for a patient in any one of the back plantations in the northern part of the state; it could not be done; the woman could not be gotten out to have it done. The conservative plan would be the one necessarily to be followed there, and it seems to me that that is the proper plan,

but the distinction always must be made between the types of cases which we get, especially cases of the fulminating type, where elimination cannot be secured and where the Cesarean section must be done.

DR. GORDON: I think Dr. Dudley, of New York, was one of the first to recommend Cesarean section. I believe they rather hooted at him and scorned the suggestion; but the doctor adhered to it during his life. Of course I believe that the majority of cases should be treated on the conservative plan. Morphine was my shield.

At this point Dr. Warren came into the meeting, and spoke as follows:

DR. WARREN: I expected, Mr. Chairman, that this paper would be "cussed" more than discussed. I should not suppose that the Maine State Association would go on record favoring Cesarean section so much. If they do, why don't they do some Cesarean section? Why do people let women die undelivered when they can save them by Cesarean section? Cesarean section is not a difficult operation. I do not pretend to be a surgeon. I have seen surgery all my life long, but it is not necessary to be a trained abdominal surgeon to make a Cesarean. You have got to know what you are about; you have got to keep your head level; you have got to be well prepared to do it; but general practitioners are making Cesareans all the time. We have a pretty large series of them up to the Maine General.

Now with reference to the question of the morphine treatment for eclampsia, which I think after all is the salient point of this paper, I have this to say: Every patient that has come to me in the Maine General, and every patient that I have seen—and I have seen thirty or forty cases possibly—has had morphine. They have had it to excess. They have had two or three grains sometimes of it. The convulsions kept right along; it did not stop the convulsions. But the convulsion is not the difficulty; it is the toxemia that you are working on. What does morphine do? Morphine directly stops intestinal secretion; it stops evacuation—elimination—from all the different organs. What does it do? It simply obtunds the nerve centers in the brain. It don't do any good. You can do just as much good with a dose of chloral; you can do just as much good with bromides; you can do just as much good with hot packs, etc. Every one of the patients that I have seen had morphine, and they had the convulsions just the same. Now what is the use of giving it? I do not see any advantage. I do not see why you do not get along just as well without it. You do not give morphine after laparotomy for fibrous growths, for ovarian cysts, for gall bladder operations. You do not give morphine in those cases. Why should you in these?

Now, gentlemen, I want you to think this over. I am getting to be an old man and my day is going by. But the question is: Can we do any better than we have done? I say we can.

I am very sorry I did not get a chance to read my own paper. I am very much obliged to my assistant, Dr. Thompson, for doing it for me, and I have no doubt it was done all right. Just think a minute! What is the use of giving morphine simply to relieve your own mind, and the minds of the family, when it does not do the patient any good?

[Applause.]

The Association voted to allow Dr. Leighton to speak the second time.

DR. LEIGHTON: MR President: Far be it from me to be disrespectful to men many years my senior, but for a man to make a remark like that, I cannot help feeling that he does not mean it. To say that morphine does not do any good is absolutely wrong. I can get six men here in half an hour who can give you conclusive proof that it does do good. Morphine will stop convulsions. But morphine is not all. It is elimination that you want to get with the morphine. If you give morphine at regular intervals to control the convulsions, you will get results. I am sorry to say it, but the doctor is away off on that, really.

DR. DAVIS: As long as Dr. Leighton has had a chance to speak twice, I should like to. I think morphine does do good, but I think that Dr. Leighton fails to appreciate why it does. I think there is confusion here between the types of eclampsia. Dr. Leighton just now was speaking of the fulminating cases, and he said that in those cases elimination was the thing. In those fulminating cases you have no time for elimination, and what good morphine does is not in stopping the convulsions, but in obtunding the shock to the brain. There is no agent which has the power of morphine in obtunding shock to the brain and it is a very valuable agent in any condition where such shock is being produced. I think if anyone has seen a fulminating case of eclampsia, he will realize that there is something which is going to kill the patient far quicker than the toxemia, and that is the exhaustion and shock from the tremendous pounding of the heart, and the tremendous shock that the woman's nervous system is undergoing all the time. I have no quarrel with elimination. Elimination should go hand in hand with any procedure; but there are cases where elimination is for the time being a very minor point. In such cases morphine is a very valuable agent, I believe.

Adjourned until 2 P. M.

(The author regrets that he could not have been present to read his own paper, nor hear much of the discussion. His statement that morphine "don't do any good" applies, of course, only to its action in controlling the convulsions, *per se*. Its usefulness as a heart stimulant and in shock had been included previously in the paper.—S. P. WARREN.)

*MEDICAL INERTIA AND A VACATION.

By DR. J. A. SPALDING.

If there is anything that I do not like it is to read a speech from a typewritten page, but as I now plan to use measured words, I must read them, to be sure that I am saying what I believe.

During my Presidency of this Society I have obtained new ideas concerning the medical profession. Leaving aside the great worth of individual members, of which we have abundant proof in the papers

* Retiring remarks as President of the Cumberland County Medical Society, December 14, 1916.

read before us, and the grand results obtained in their private practice. I find that the chief fault of the profession, as a whole, is medical inertia. Concerning that topic I will now read, as the writers say, a few words, and then shall emphasize instances of such inertia as have come under my observation during the past year.

The City of Portland has for some time past employed a few physicians as Medical Examiners of Schools, their duties consisting in attending to such flagrant instances of disease as were brought to their attention by the teachers. The service done to the city by these meritorious men was excellent, although it did not go far enough. They had no authority to examine all the children, as they should have had, and as is sure to come, if people can be awakened to the crying need of improved examinations. Money running short, or funds being needed in certain wards for other purposes than "a waste of money on over-paid doctors," they were ousted from office on the plea of economy. Did, then, any member of the profession protest against this gross cessation of a public necessity, or the dismissal of these useful men? Was any medical protest handed in to the City Government, setting forth the economic value of School Physicians? So far as I have discovered medical inertia prevailed.

Then came our city election, and again, was anything done by the profession to show the need of school examinations, to urge the reinstatement of the old Board or the appointment of a new? Was a single candidate for office asked if he would, or would not, vote for such good purposes as these? So far as your retiring President can see, nothing was done except by me, in my position as President, and the letter which I sent to the papers only appeared after all the election speeches had been spoken, and when it could do no good at all. The question: "Will you vote for Medical School Examiners?" failed to produce any effect in the election, so far as my efforts were concerned.

Every country except our own is insisting more and more on physical examination of children as the basis of national health. If we do not know the sum total of our national health, what can we do in times of peril to which we are doomed in spite of being "kept out of this war." For that one idea, that one nation shall rule the world, is not going to be settled for good across the seas, but will have to be tried out, right here, before it is settled for all time.

I want, now, a petition, signed by every physician in Portland, asking for a return to our former system of medical school examinations, and I look for that petition to be backed up by an address, showing the needs of precise physical examinations of all children, first, as a national asset, and then for the prevention of diseases, the chief of

which, tuberculosis, is always with us. Students of colleges, women and men alike, feel no shame in a physical examination for fitness, and if they are satisfied, then the parents of children should be taught that examination of girls by women physicians and of boys by medical men is the thing to have, and to have NOW.

As for tuberculosis, you know as well as I, that Maine spends large sums in the vain attempt to cure advanced cases of that disease which could be early discovered in the schools, if only Examiners had the power given them to use. Why, even without stripping a child stark naked, we all know that by measurements of surface temperature, the presence of swollen cervical glands, phlyctenulæ of the eyes, murmurs of the heart, acromion auscultation of the lungs and tuberculin tests, many instances of early tuberculosis can be discovered in time, segregated, treated and cured.

Just so sure as the sun rises on a certain day in January and illuminates our State Legislature, so surely will some sect ask for a special Board of Examiners, to enable them to practice medicine without the examination demanded of other physicians. In the same spirit of inertia as as of old, our Association will hire an attorney, hand in testimony at waste of money and time, and oppose the claim. "It is only a dollar apiece." But a dollar saved is a dollar earned. What we ought to do is to go into politics, and "heckle" public speakers with this one question: "Will you vote in the Legislature for one Board of Registration for all who want to treat the sick?" Such a question would wake up people, would make them think, and they would learn, for the first time in their lives, that there are self-respecting countries which have such a law and that it works well. They would learn that there are fifty sects of treatment who would like the same favor of a special Board. They could be told of the folly of the "King's Touch" during the reign of King Charles II of England. For instance, he "touched" 90,000 persons afflicted with scrofula. They could be taught of the folly of Perkins' "tractor," made of two bits of copper and iron wire, and which "tracted" disease from thousands of people. They could hear of the tar-water delusion, and of Thompsonianism, which treated all diseases by puking with lobelia. Then the climax could be capped by asking, "What would you think of legislators giving a special Board of Examiners for fitness in practicing the King's touch, tractoration, tar-water baths and lobelia vomitings?" "One registration law for all" is a slogan worth shouting into the ears of candidates. I do not look for such a reform in my time, for few reforms have been

attained since I set off into medical life. But education is repetition and reiteration; and if you repeat, and reiterate. "One Registration Board for All," you will get it some time, though that happy day will depend on diminution of medical inertia.

Transportation Accident Insurance for defectives is a part of Public Health Insurance into which the profession should inquire. I mean that the old, the deaf, the halt, the blind and the maimed should not be denied accident insurance on the ground that they are defectives and that the cost of insuring them is too great, in other words, the chances of loss are greater than with picked risks. Yet, many corporations make no bones of insuring healthy people with sight in only one eye, in spite of the enormous accidental risks attaching to such a defect.

Here is my idea regarding Transportation Accident Insurance. A short time since fifty able-bodied persons were instantly dropped into death in a trolley car in Boston, which ran through a draw bridge. Would fifty blind, deaf, old, infirm persons have been drowned any more surely than those able-bodied men and women? Would the risk to any insurance corporation in insuring those drowned persons have been a bit greater had they all been defective? I think not. People are daily injured on motor cars, and would they be injured any worse if they were what are called defectives? So, too, in railroad accidents. Does any physical defect increase the risk of injury over and above that accruing to those in perfect health? I believe that corporations should accept all accident insurance transportation risks at rates to be determined by the courts. If a defective like myself, deaf for life, talks upon this topic, I am told that I am "interested," that I am "not a safe risk," but in spite of arguments to the contrary this topic should be studied. Transportation Accident Insurance for defectives is worth investigating as a portion of Public Health Insurance. I opened the discussion ten years ago, but medical inertia has so far left it alone.

The past year has seen a suit for malpractice settled by payment of a verdict against a physician; we have seen another, dragging its way across the courts against the estate of a deceased physician, and we have had one at our own doors which terminated against a friend of us all. "But he was insured," is the cry, and to the merits of the case small attention is paid. But I say that you cannot "insure" a brother physician against the mental anxieties of such a case, nor against the publicity of the papers, nor the aggravation of physicians

appearing against him on the plea that his treatment was wrong. Yet for all that we may know the wrong of this very minute may be the right treatment of the next, so rapidly do medical fashions change.

Nor can you "insure" a physician against loss of practice which continues until publicity attaches itself to another unfortunate. I know what such suits mean, and although my opponents were driven off, the mental worries of that time have never been forgotten, nor the nervous dread that another may come. Worse, too, than all these anxieties, there hangs over a physician who has been sued, the life-long anxiety that interferes with his skill in the dread of not operating precisely right.

You may now ask me, "What has this to do with medical inertia so long as we are insured?" And my answer is this: Do you know that we in Maine are paying more than fifty times as much for our insurance against malpractice suits as is paid by the physicians of twenty-eight other States? Do you know that in addition to this excessive cost, the number of suits against those insured, at fifty times what it costs in twenty-eight other States, is larger than where medical defence against malpractice suits exists? Can I not make it plain to you, that medical defence against malpractice suits by mutual agreement amongst the members of State Medical Societies produces fewer cases, brings better verdicts, and, best of all, it prevents the degradation of physicians testifying against one another, on any paltry excuse?

Medical defence gets rid of these unhealthy conditions facing physicians and the public, too, for the story of the case is perverted in the public reports, and the testimony of the physicians is flouted. When we are told that nobody pays any attention to the testimony of experts, we should retort that if we could have a chance to answer questions that were not underhand, treacherous and suggestive of lack of truth, we would give opinions that were worth the while.

Medical defence, I add, settles some of our troubles definitely, for when a disgruntled patient sees facing him, as defendant, the iron-clad, machine-gun mounted tank of a State Medical Society, and no corporation with plenty of money to be "touched," he will wonder if he can get any verdict at all, and more than that, he will wonder where he can find a physician to testify against a member of the very State Society which is going to defend him if he is sued.

I will not talk for effect, but say, in brief, as the result of my study of medical defence in twenty-eight States, that it never compromises, that it pays no hush money, that it wards off litigious attorneys, and the brightest item is, that in eighteen years of medical defence in New York, where there have been more than two hundred suits for mal-

practice, in no single instance has a final law court verdict gone against the Brotherhood of Defending Physicians.

This topic needs study by our younger men. The union of the profession is needed and the dismissal from the State Association of the member who sells his testimony on the witness stand. Soon such steps must be taken. Where are we to look for a leader?

No other instance of medical inertia is so plain as the failure of the profession to protest against the present fallacy of the infallibility of X-ray pictures as a means of certain diagnosis. If you take an X-ray and burn the patient you are sued. If you do not take one you are sued for neglect. Opinions are laid down that X-ray pictures are infallible, and that if you fail to make them or to utilize them you are neglectful of your patient. Anyone who studies the Journals of to-day will find many instances of erroneous shadows thrown by the X-rays, and of operations based on those deceptive shadows which have imperilled the lives of patients, and other instances in which repeated operations have been needed before the precise position of foreign bodies, as falsely shown by the X-rays, could be discovered, and the missile removed.

A soldier shows two wounds on his thigh. The X-ray reveals a foreign body. It is removed, but irritation persists, and another X-ray shows a second foreign body, overlooked at the first examination. An X-ray picture shows a large piece of shell, which is removed, but inflammation sets in and another operation is done to remove eleven pieces of the shell which the X-ray did not show. Urethral calculi have been operated upon, but nothing found, for the X-ray pictures foreshadowed warts on the back of the patient. A final instance of erroneous X-ray diagnosis was in the need of three operations, one on the front of the humerus, one on the back of it, whilst at last the bullet was found lodged behind the scapula.

In order to get rid of our inertia and our constant surrender to the claim of the infallibility of the X-rays, I look to some member of our Association to study many published skiagrams, with a view of discovering instances in which mistaken diagnosis and dangerous operations have been performed on their false testimony. Such a paper should be read before the State Association, there discussed, and finally published and reprinted and made available for our defence.

Talk crops up occasionally of a Board of Medical Experts in malpractice suits, but it is useless, for the common law will never let a citizen be deprived of his constitutional right to expert testimony on his side as well as on that of the State.

Dreams of a dreamer, you will call my remarks. But if I only had ears with which to hear, you would see me face to face with the politicians who, in the call for economy, waste public health and shorten life. Dreams of a dreamer, indeed! Yet, what are all the advances ever made in this world, but the realization of the dreams of the dreamer, of the inventor of ideas! The great trouble with them all, as they unfold themselves before us, is how to get them before the world so that their real value can be shown. The railroad, the motor car, the aeroplane and the submarine—dreams of the dreamer, yet once realized, of how much value to us all. So, too, with the marvels of abdominal and cerebral surgery.

My final dream is to see in the Governor's Council not a mere uniformed Colonel of Physicians, but a Working Medical Adviser, with money, and ability and power to act for the health of us all.

Now, Fellow Members of this Society, the last instance of inertia for which I offer its remedy is this: They say to me, "I could write papers if I could only think of a subject," and I say that I have here offered to each and all of you five topics of great importance in medicine: "Physical Examinations in the Prevention of Disease;" "One Medical Registration Law for All;" "Transportation Insurance for Everybody;" "Medical Defence," and "Fallacies of Some X-ray Pictures."

A royal flush is a good hand in poker, and I lay down my hand of a royal flush of papers for part of the program of the next State Association meeting. Pick what you want, choose two good men to discuss your views, and others will enter in, unless medically inert.

I will now cease from scolding, repeat that I have done my best to fill the Presidential chair, and personally thank our excellent Secretary for his great assistance. I have looked into the schools, studied health conditions, stirred up the milk pans, and the question of school examiners, written open letters to the papers on medical topics, tried to obtain papers alike from men at home and those outside the State, and, though conscious of my shortcomings, I will say that I have tried to do my very best for every day in the year of my Presidency.

Now I am looking forward to a retirement from this office. Even honey cloys, as was said thousands of years ago. We all love a change, and a change is a vacation. Some of us rush to the woods to shoot the bounding deer, or the lumbering bear, and in that vacation they take the chance of being shot, as one or the other. Many love to tear away on motors, seeing nothing ahead as they go, but vaunting of the

hundreds of miles left behind. Their vacation is speed. Some like camping out and living next to nature. Some visit hospitals and make a vacation in watching others do the work and take the responsibility. Europe was once the ideal of vacationists and will be that of others when the war is ended. All such vacations are faulty, in that you have to pay too much for them in working so hard to get there. Right at home, let me remind you, many of us can find a vacation just as conducive to health as traveling hundreds of miles. In the autumn I dig my beds in the garden and thrust down the bulbs to bloom in the spring. In my cellar I find a stray bit of wood to saw. In the winter, the light labor of the furnace makes a change of scene and work and is really a vacation. Some hire the furnace man, who overheats you at 5.00 in the morning, almost sets the house on fire in his ignorance (and yours, too), and burns more high priced coal in a season than would pay for a suit of clothes. A dusty vacation you will call that of my furnace work, yet not more dusty than the parched-up roads of Summer-Maine, unless you can afford the stylish enclosure of a limousine. Did you ever look at my hyacinths in the spring? Fine, are they not? Yet they represent a short vacation which I took in my front yard in putting down the bulbs. Is there anything in the world like melody? I say no, and when you turn, as I turn, from language, or medicine, or the lives of bygone physicians, what sweeter vacation can you have than in playing to yourself or in listening to music made by others?

All of these vacations, the list of which might be easily extended, all of these changes of labor, changes from one room to another, changes from inside the house to out of doors, occur to me daily. Yet now, as I stand before you, I see approaching the finest vacation of my life in retiring from the Presidency of this Society. I leave you with assurances of my very deepest thanks for your constant courtesy toward me at all of the meetings, and for your forbearance with all my defects. I can now take up once more some of my former vacations in medicine, in music, in billiards and in history, in which I have indulged so serenely and so happily during forty years and more in Portland, Cumberland County, Maine.

MEDICAL LEGISLATION.

OSTEOPATHIC BILL.

We have the assurance of an early introduction of the usual bill to provide for a separate board of registration. It might not be remiss to compare the principal features of their bill which has been introduced into the last three or four sessions. With the medical registration law now on the statute books, the vital points are, first, the qualifications, and second, the privileges granted to the successful applicants.

In the following paragraphs, you will note that side by side the principal issues stand out.

REQUIREMENTS OF MEDICAL REGISTRATION BOARD.

Under Section 12 we find:

"They shall embrace the general subjects of **anatomy, physiology, pathology, bacteriology, sanitation, chemistry, materia medica and therapeutics, and practice of medicine, obstetrics, and such branches of medical science as the board may deem necessary for the applicant to be versed on.**"

PRIVILEGES.

(Not well defined.)

Under Section 15, penalty for violation:

"Unless duly registered by said board, no person shall practice medicine or surgery or any branch thereof, or hold himself out to practice medicine or surgery or any branch thereof for gain or hire within the state, by diagnosing, relieving in any degree, or curing, or professing or

REQUIREMENTS IN FORMER OSTEOPATHIC BILLS.

Section 4.

"The board shall then require the applicant to submit to an examination as to his or her other qualifications for the practice of osteopathy, which shall include, among other subjects, the subjects of **anatomy, physiology, chemistry, bacteriology, toxicology, pathology, dietetics, diagnosis, hygiene, obstetrics and gynecology, minor surgery, principles and practice of osteopathy.**"

PRIVILEGES.

Under Section 5:

"When the board shall have granted to a person the certificate it shall be publicly displayed at the person's principal place of business so long as said person continues to practice osteopathy for gain or hire, and it shall entitle the person to whom granted the right to practice osteopathy in any county in this state, **and shall confer upon such person**

attempting to diagnose, relieve or cure, any human disease, ailment, defect or complaint, whether physical or mental, or of physical or mental origin, by attendance or by advice, or by prescribing or furnishing any drug, medicine, appliance, manipulation, method, or any therapeutic agent whatsoever, or in any other manner unless otherwise provided by statute of this state."

all the rights and duties conferred by law upon other medical practitioners, except the right to administer medicine internally and perform major surgery, and provided further, that nothing in this act shall be construed to discriminate against any particular school or medicine or surgery, or any system or mode of treating the sick or afflicted."

If such a proposed act became a law, we would have two boards with almost identical requirements and granting practically the same privileges, differing only in name. The writer ventures to predict that ten years after the enactment of such a law the public will be unable to differentiate between the regular and the osteopath.

Let us consider for a moment just what constitutes a registration board and how constituted. The medical practice law in Maine was an act of our Legislature and provides for four regular and two homeopathic physicians. Although placed on the statute book through the activities of medical men, it immediately became part of the state's political machine, and represents the state in carrying out its provisions, but not the medical profession. With one exception, the personnel of the board has been above reproach and justly deserve credit for the work they have done. The surplus funds over and above actual requirements revert back to the state treasury.

Section 8 provides that "The governor, with the advice and consent of the council, shall appoint a board of registration of medicine consisting of six persons, residents of the state, who shall be graduates of a legally chartered medical school or university," etc. The medical profession has nothing to do directly with the appointments to this board nor in determining any of its duties or policies. If the board agreed to extend its duties to include the examining of the various sects and taking them under their control, they would be wholly within their province to do so. The writer fully believes that such action on the part of the board would solve this question for all time, and, rather than be detrimental to the profession, would raise it in the eye of the thinking public from the unfortunate antagonistic attitude of the past.

F. Y. G.

CHIROPODY.

We have before us a copy of "An act to regulate the practice of chiropody."

MEDICAL BOARD TO REGISTER.

"Section 1. On and after July 1, 1917, no one shall practice the branch of medicine known as chiropody, as thereafter defined, unless duly licensed so to do by the board of registration in medicine after examination conducted by such board or a committee thereof, under such rules and regulations as said board may determine."

DEFINITION.

"Section 2. The definition of the word 'chiropody' shall, for the purpose of this Act, be held to mean the external treatment of the structures of the human feet, by **medical, mechanical or surgical means** without the use of anesthetics other than local."

Here, again, we find another cult coming before our Legislature asking for the right to do minor surgery, under local anesthetics, on the foot. This is the forerunner of other cults and leads us more strongly to believe that the regular medical board should devise some reasonably just method to take these under their direct supervision.

F. Y. G.

PERSONAL NEWS AND NOTES.

Dr. L. A. Derry, Portland, who has been on the sick list for some few weeks, is improving.

Dr. R. A. Graves, Presque Isle, and Miss Mildred Doane, Brewer, were united in marriage January 3.

Dr. Harold Goodwin, Bates 1908, Harvard 1913, has opened an office in Lincoln, Me.

Dr. W. B. Young, Camden, has been appointed physician at Camp Weymouth, Hosmer's Pond.

Dr. C. R. Burr, Portland, leaves this month to assume new duties as assistant medical director of the Metropolitan Life Insurance Company and will be located at the home office in New York City. Dr. Burr has always taken an active interest in public health questions, was a thorough student and a very valuable member of our editorial board. We congratulate the doctor and extend our most sincere wishes for success in his new field of work.

Dr. and Mrs. O. B. Head and daughter, New Sharon, left the first of the month for a trip to New York and South.

(Continued on page 203.)

JOURNAL OF MAINE MEDICAL ASSOCIATION

Editorial Staff.

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DR. J. A. SPALDING, Portland.

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DR. CARL M. ROBINSON, Portland.

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DR. S. J. BEACH, Augusta.

DR. G. A. NEAL, Southwest Harbor.

DR. F. H. WEBSTER, Rockland.

*Editorial Comment.**Health Insurance.*

With the beginning of our legislative session, we are again reminded of the question which has been recently introduced into the Massachusetts assembly after consideration by a representative committee of the state and county societies.

Unlike the European plan, every effort has been made by the promoters of this legislation to secure the co-operation of the medical profession and the original draft has undergone many changes as the result. The bill recommended by the representative committee of the New York Medical Society, receiving the approval of the society, is now introduced into the Massachusetts Legislature and provides for representation of the profession on the Health Commission and sub-committees. It dispenses with the question of the relation of the Health Department to the Commission by making the Commissioner of Public Health a member of the Health Insurance Commission, and finally, the necessary medical representation on the sub-committees to insure reasonably fair treatment for the medical profession.

We must keep in mind that this is an insurance measure, and, like the Workmen's Compensation Act, does not specify what the physician's compensation shall be, but merely limits the liability of the fund. A careful study of this question leads the writer to the belief that the rank and file of the medical profession will be benefited by such a law. It will do away with the lodge practice, which so permeates our city life, and insure some compensation from the large mass of labor now being treated in charitable institutions, as the pro-

posed act provides medical care, nursing and even hospital care, if necessary, for all classes of labor earning \$100 per month or less.

Organized labor has gone on record opposing this act on the grounds that it interferes with their liberty as citizens of a free country. The labor leader apparently believes it more desirable to maintain the right of labor to sue in case of accident, even though the ambulance-chasing lawyer gets practically the amount awarded by the jury, after payment of costs.

The medical profession should organize more solidly than ever and each county society secure every available member. Let us be ready to meet this question if it arises in Maine, and be sufficiently conversant with it so to know how to act for the best interest of the profession.

New Year Resolutions.

Among our new year resolutions, we find a growing desire to make the 1917 volume of the Journal of greater value than any of its predecessors. Every effort has been made to place your Journal on as nearly a self-supporting basis as possible. We even have hope that it will be wholly supported by its advertisements, and right here comes the resolution, which we hope the members of the Maine Medical Association will not lose sight of, viz., look through the advertising pages of your Journal each month and check up the articles you desire, and when you place your order with our advertisers mention the fact that you saw their advertisement in your Journal; it will not only insure a self-supporting Journal, but a bigger and better one. Just think how small a matter this is to you compared with the amount of work necessary for your editorial board to continue this work. We want more active co-operation for 1917. Patronize our advertisers and let them know why you do it.

Medical Defence.

In the retiring president's address for Cumberland County, Dr. Spalding discusses many matters of interest to us all. The writer was particularly interested in the calling to our attention the value of medical defence. Some four or five years ago, the writer served as chairman of a state committee on certain reforms, etc., and among the issues presented at that time was this very question. It was submitted to the county societies and received their endorsement and finally came before the state association and was laid on the table on motion of one member, who afterward explained that he made the motion because he did not fully understand the question. Just bear

in mind that this was a live issue in over twenty states, and had been a live issue before our county societies for six months, and he alone was at fault for not knowing anything about the matter when it came up for final action. The state committee and various county committees had carefully gone over the data submitted from the states having medical defence and were convinced that it had an unusually strong value in state organization life, and accomplished all that Dr. Spalding now claims for it. Furthermore, the state association had over \$3,000 in its treasury at the time this matter was up for action. We hope that this matter will again come up for consideration, and that due importance will be given to the careful study of the question by the committee appointed. Just bear in mind that every issue tending to bind the profession more solidly is a factor of importance, and this is a very valuable one. Let us welcome all good measures that will tend to bind us together more strongly, and we will have more enthusiasm to meet the bigger and more important issues of the future.

Hypochlorite of Soda Wound Infection Treatment in France of To-day.

Our celebrated surgeon, Dr. Carrel, and our no less distinguished chemist, Dr. Dakin, have been for some time using with much success their newly invented remedy for preventing wound infection on the battle fields of France.

Their ideas may be formulated in this way. Almost every wound from exploded shells is infected, from contact with the fragments of metal, or from infection of the skin before the injury, or present in the clothing of the wounded soldier. Wounds from smooth bullets are also mostly infected. If infection does not kill, or necessitate amputation, it leaves dreadful scars, which may prevent use of an arm or leg, even if the original injury were slight. Theoretically, all wounds caused by clean metal ought to heal quickly if not touching a vital point, but infection prevents this. Hence it is a problem to prevent infection. The method discovered by Carrel and Dakin is a new application of the ideas of Lister and Pasteur. We may call it the scientific climax of sterilization.

Every soldier is covered with dirt and infected from long human living in his clothes. Most wounds carry ever-present infection into the flesh. The most dangerous infectives are streptococci, and gaseous gangrene from such infection is common, and arises from delay before treatment can be applied. The process which in the hands of Carrel and Dakin is killing infection comes first from Pasteur, who

discovered microbes as the cause of all infection, and from Lister, who used carbolic acid as a germicide. Other disinfectants were discovered, but abandoned because surgeons worked in the wrong direction. They thought that only substances which irritate the tissues could kill germs.

Starting from this basis, our two Americans worked on the difference in the resistance of normal tissues and of microbes, and studied remedies which did not irritate the tissues, yet killed the germs. Amongst many substances chemically studied by Dakin and tested surgically by Carrel, they came to certain chloramines and sodium hypochlorite, prepared without alkali by Dakin's method. This hypochlorite, free to the world to use, is the most efficacious, cheapest and simplest germicide yet discovered. Trials in thousands of cases prove its value in preventing infection, and an enormous reduction in the number of amputations called for in the battle-wounded. Moreover, the time of treatment has been much reduced. The cost is small, say six cents for as many quarts of the solution, ready for hospital use. It should be applied as first aid, and continued as long as needed.

Almost every amputation in our Civil War was due to infection; in 70 per cent. of such operations in the early part of the Great War this was the cause, but now that percentage has fallen to almost nothing. The old idea was to flush out with a current of aseptics any germs present; the hypochlorite idea is to keep a definite chemical substance properly concentrated for an ascertained length of time upon the surface of a wound. By this system wounds are rapidly and actually rendered sterile.

J. A. S.

Personal News and Notes—Continued.

Dr. W. F. Hart, Camden, has returned from a six weeks' trip to the Pacific Coast.

Dr. M. A. Webber, Portland, has entered the Medical Reserve Corps for a term of three years. Dr. Webber was a graduate of Bowdoin 1907, Medical School of Maine 1910. He will immediately sail for Porto Rico and take up his duties there.

Dr. Carl M. Robinson, Portland, who enlisted in the Red Cross Service in a Harvard Unit some few months ago, and stationed in France, has entered the regular service and ranks as Major. His promotion has been rapid and gives us full assurance that he is pursuing his new life with that same keen, intense interest that characterized his life among his confreres at home.

County News and Notes.

CUMBERLAND.

CUMBERLAND COUNTY MEDICAL SOCIETY.

The quarterly meeting of the Cumberland County Medical Society was held December 14th. This being the annual meeting, the following officers were elected for the ensuing year :

Dr. W. D. Williamson, President.

Dr. Cunston, Vice-President.

Dr. A. W. Haskell, Secretary.

Dr. W. W. Dyson, Treasurer.

Dr. Daniel was elected to the Board of Censors.

Dr. J. A. Spalding, the retiring president, gave for his subject, "Medical Inertia."

Dr. William Russell MacAusland was a guest and his subject was "Fractures."

A. W. HASKELL, *Secretary*.

PORTLAND MEDICAL CLUB.

The first meeting of the Portland Medical Club for 1917 was held at the Columbia Hotel, January 4th, with Dr. Philip P. Thompson presiding. Thirty-two members were present.

Dr. G. A. Tibbetts and Dr. C. N. Peters were elected to membership.

Dr. Adam Leighton, Jr., reported a case of lead poisoning in a lady who had worked with paints.

Dr. Driscoll reported a case with symptoms of laryngismus stridulus. These occurred in a child with bronchitis and disappeared after this condition had cleared up.

Dr. M. C. Webber reported a case of a boy with a bullet wound of the thigh. The patient maintained that the wound was self inflicted, but as the point of entrance was behind, it had seemed to the doctor that this could hardly be the fact. After considerable questioning the boy finally admitted that the shot had been fired by a playmate whom now he wanted to shield.

Dr. Warren reported a case of paraplegia in a woman who had had symptoms of impending puerperal eclampsia.

Dr. Twitchell spoke of peculiar mental symptoms occurring in a woman who had fallen upon an icy sidewalk striking on the back of

the head and neck. Following the injury there was marked slowing of cerebation with amnesia, which lasted several days, but which subsequently cleared up. In addition to the mental symptoms there was also pain and tenderness along the spine.

The paper of the evening, "Chronic Arthritis Due to Focal Infection," was read by Dr. T. J. Burrage. It dealt principally with focal infections of the tonsils, accessory nasal sinuses and around roots of the teeth as being frequent causes of chronic arthritis. Cases were reported in which the removal of such foci was followed by marked improvement and often by recovery. When symptoms do not improve after the removal of one focus the search should be continued, as not infrequently several foci may exist. If the X-ray shows numerous root abscesses not too many teeth should be removed at one sitting, lest a sudden general toxemia occur. As aids in treatment, baking, and, in occasional cases, vaccines are of value. The paper proved unusually interesting and was liberally discussed.

H. M. SWIFT, *Secretary*.

HANCOCK.

HANCOCK COUNTY MEDICAL SOCIETY.

A regular meeting of the Hancock County Medical Society was held at the residence of Dr. C. C. Morrison, Bar Harbor, Dec. 20, 1916. Officers for the ensuing year were elected:

President, Dr. Harrison B. Webster, Castine.

Vice-President, Dr. Geo. A. Phillips, Bar Harbor.

Secretary and Treasurer, Dr. Geo. A. Neal, Southwest Harbor.

Censor, Dr. Lewis Hodgkins, Ellsworth.

Delegate, Dr. R. W. Wakefield, Bar Harbor.

Alternate Delegate, Dr. Arthur H. Parcher, Ellsworth.

Owing to the difficult traveling, the full literary program was not carried out.

The following was presented: "Review of the Year's Work," by the retiring president, Dr. C. C. Morrison. "Therapeutic Fallacies," by Dr. R. W. Wakefield.

Those present were Drs. C. C. Morrison, E. J. Morrison, R. W. Wakefield, Geo. R. Hagerthy, of Bar Harbor, Dr. Arthur Parcher, of Ellsworth, and Drs. J. D. Phillips and G. A. Neal, of Southwest Harbor. Rev. Mr. Larned, of Bar Harbor, was the guest of the evening.

After the literary exercises the usual inviting lunch was presented by the host, Dr. C. C. Morrison.

GEO. A. NEAL, *Secretary*.

KENNEBEC.

KENNEBEC COUNTY MEDICAL ASSOCIATION.

The annual meeting of the Kennebec County Medical Association was held at the Augusta House, Augusta, Maine, December 7, 1916. The treasurer reported the largest membership in the history of the society.

Officers for the coming year were elected as follows:

President, Dr. O. C. S. Davies, Augusta.

Vice President, Dr. A. U. Desjardins, Waterville.

Secretary, Dr. S. J. Beach, Augusta.

Treasurer, Dr. S. E. Vosburgh, Augusta.

Censors, one year, Dr. R. H. Stubbs, Augusta; two years, Dr. B. P. Hurd, Waterville; three years, Dr. T. E. Hardy, Waterville.

Delegates of Maine Medical Association, Dr. S. J. Beach, Dr. F. E. Strout, Dr. H. K. Stinson; Alternate, Dr. H. A. Milliken.

After supper came the address of the retiring president, Dr. H. K. Stinson, on "The Value of Consultations." In this the speaker urged the profession to seek advice in difficult cases, and to give sincere and helpful counsel when sought, and showed how a proper consultation was of value both to the patient and to the practitioners.

Dr. Desjardins followed with a continuation of his paper on "Surgery in the War," with lantern slides illustrating largely the treatment of compound fractures by reinforced plaster splints, allowing openings for dressing wounds.

S. J. BEACH, *Secretary*.

OXFORD.

OXFORD COUNTY MEDICAL SOCIETY.

The regular quarterly meeting of the Oxford County Medical Society was held at Mechanic Falls on Thursday, Dec. 21st.

Aside from the usual business the following officers were elected for the year 1917:

Dr. I. H. Wight, President.

Dr. R. W. Bicknell, Vice-President.

Dr. D. M. Stewart, Secretary and Treasurer.

Dr. F. E. Leslie, Censor for three years.

Dr. D. M. Stewart and Dr. J. S. Sturtevant, Delegates to Maine Medical Association.

Dr. Frank Y. Gilbert, editor of the Journal, read a paper entitled "Industrial Health Insurance," which brought out many new and important phases of the practice of medicine, both from an economic

and a professional standpoint. The author's prediction that some form of compulsory health insurance will exist in this state within a few years made the subject a live issue and it was discussed by *all* the members present. The discussions are a valuable part of our meetings, and a paper which opens up questions for debate is sure of a warm reception in Oxford County.

Acting on a request from a member of Androscoggin County, Dr. H. W. Stanwood and Dr. R. W. Bicknell were appointed to act in conjunction with a committee from Androscoggin and Franklin County Medical Societies in the matter of hospital abuse.

The following vote was also passed: "That Oxford County Medical Society is in sympathy with any reasonable legislation intended to prevent hospital abuse."

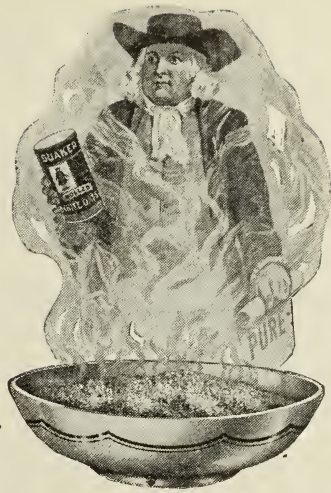
Dr. F. E. Leslie, the retiring president, then gave his annual address, the subject of which was "Mental Hygiene." The subject was presented in a thorough and interesting manner and would have aroused an enthusiastic discussion had time permitted.

DR. D. M. STEWART, *Secretary*.

YORK.

YORK COUNTY MEDICAL SOCIETY.

The 87th quarterly meeting of the York County Medical Society was held in the Common Council chamber, Biddeford City Building, Thursday, Jan. 4th. The forenoon session was opened at 10.30 o'clock, Dr. H. L. Prescott, Kennebunkport, the president, in the chair. The records of



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the October meeting were read and approved. Dr. John W. Schafer, Bowdoin Medical, '97, of Berwick, was elected to membership.

Drs. C. E. Thompson, Saco, C. F. Kendall, Biddeford, B. F. Wentworth, Scarborough, were appointed a committee on resolutions, and they reported as follows:

WHEREAS, through a dispensation of Divine Providence, the York County Medical Society lost two of its esteemed members, Dr. James H. Shannon, of Saco, and Dr. Roland S. Gove, of Sanford, and whereas, we deeply mourn the loss of two such valued and respected members of this association, and sympathize with the relatives and friends of the deceased, therefore be it

Resolved, That the medical profession of the county and state has lost two of its able and faithful members, and their relatives and friends have suffered a great loss.

Resolved, That these resolutions be spread upon the records of this society, and a copy of them forwarded to the relatives of the deceased.

DR. C. E. THOMPSON,	} Committee
DR. C. F. KENDALL,	
DR. B. F. WENTWORTH.	
	on
	} Resolutions.

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These resolutions were adopted.

Drs. J. D. Cochrane, Saco, W. W. Smith, Ogunquit, and J. A. Randall, Old Orchard, were appointed a committee on nominations, and they reported the following:

President, Dr. Chas. E. Cook, So. Berwick; Vice-President, Clarence F. Kendall, Biddeford; Secretary, Arthur L. Jones, Old Orchard; Treasurer, Chas. F. Traynor, Biddeford; member of Board of Censors for three years, Dr. James C. McCorison, No. Berwick; delegate to Maine Medical Association for three years, Dr. Frank W. Smith, York Village.

These candidates were elected as reported.

The Secretary's report showed that sixty-nine members were reported to the Secretary of the Maine Medical Association, last May, five members were elected during the year 1916, and there were two deaths. Total membership Dec. 31, 1916, 70.

This report was accepted.

The Treasurer's report:

Cash in treasury Jan. 1, 1916, \$ 63.26
Received during year, 231.00

\$294.26

Expended, 210.83

Bal. in treasury Jan. 1, 1917, \$83.43

This report was accepted.

Dinner was served at Hotel Thacher at 1 o'clock.

The afternoon session was opened at 2.30 o'clock, Dr. C. E. Cook, the newly-elected president, in the chair.

Dr. H. L. Prescott presented the address as retiring president, his subject being, "The Physician's Responsibility."

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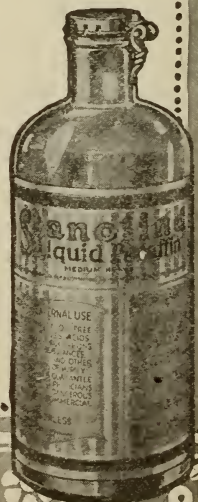
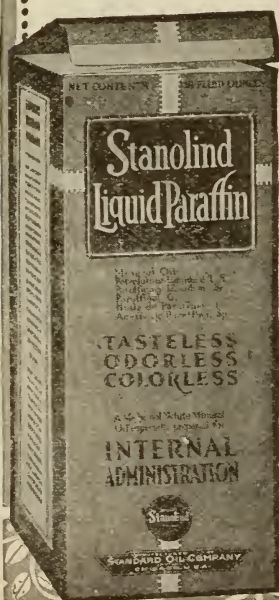
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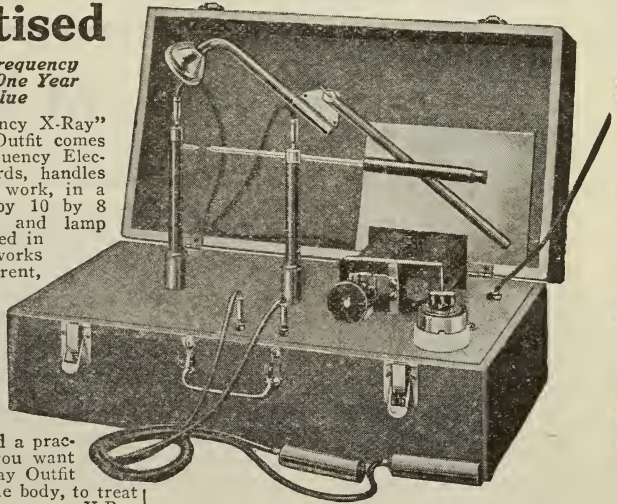
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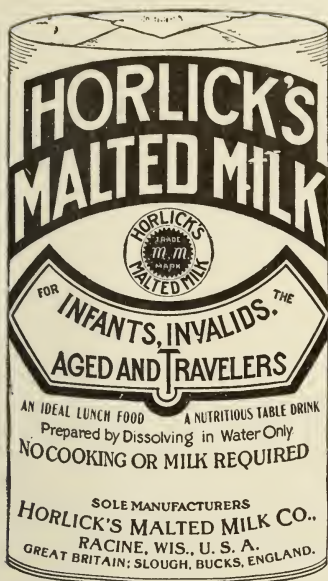
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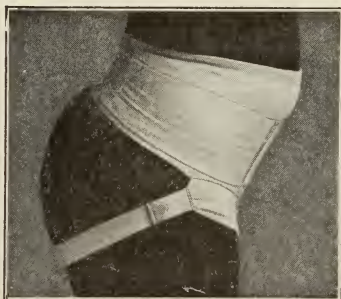
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The Official Organ of the State and County Medical Societies.

VOL. VII, No. 7

FEBRUARY, 1917.

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York,		

TABLE OF CONTENTS

Original Articles—

The Surgical Significance of Abdom-
inal Contusions..... 209
Asthma in Children..... 225
The Use of the Duodenal Tube..... 230
Necrology 233

Editorial Comment—

Why Not Pyxical?..... 240

Miscellaneous—

Medico-Legal..... 240
County News and Notes..... 243
Personal News and Notes..... VI

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The Journal assumes no responsibility for opinions expressed by the authors.

VOL. VII.

FEBRUARY, 1917.

No. 7

***THE SURGICAL SIGNIFICANCE OF ABDOMINAL CONTUSIONS.**

By FRANK H. JACKSON, M. D., F. A. C. S., Houlton, Me.

The study of abdominal contusions is an extremely important and interesting one from a surgical standpoint. It is imperative that we keep constantly in mind the very important fact that every contusion, applied directly or indirectly against the subparietal viscera, even if at the time of the accident the condition is deemed as trivial, is capable of serious mischief. The treatment, once diagnosis is established, is usually surgical, yet it must be admitted that a positive diagnosis is often impossible and that we must perform exploratory laparotomy, a method decried by certain members of the profession. In defense of this procedure we might say, however, with an acute surgical abdomen it seems the acme of surgical folly, if one would be polite, and the height of inanity, if we would speak the truth, to allow a patient to bleed to death, or sit calmly by awaiting the symptoms of diffuse septic peritonitis, while men attempt to interpret the mental picture of some text-book surgeon as to the propriety of opening the abdomen. Contusions of the abdomen vary so greatly in the amount of their force and the amount of damage inflicted in each case, and the vagaries of symptoms are such that he who would play safe must exercise every bit of surgical judgment that he has, or may be able to call to his aid, and judge each and every case from the evidence obtainable. In certain cases the nature of the accident and immediately resulting symptoms are such that it is plainly time

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wasted to do anything but attack the surgical problem at hand. Others, from similar reasons, present few or no important symptoms, and we, at the time, may regard the case as trivial, to learn in a few hours or days that such is not the case to our deep chagrin. It certainly is not pessimism that makes one doubt the efficacy of medicated mud, morphine and the hypocrisy of medical hope in a case of ruptured intestine.

Obviously the question in each case is, has the patient sustained an injury of such a nature that the abdomen must be opened to save life? Upon the correctness of our judgment depends the life of the patient. Many of the cases are absolutely hopeless from the outset, operation in such cases can do no good; but with the large mortality in a great number of the injuries, to play the game fair and square means that we not be deterred from doing our duty from fear of the hostile criticism of others and that operative statistics must not be considered.

Accurate and a fairly exact anatomical localization of the injury sustained is often aided by a complete history of the accident. Injuries sustained by a child, a poorly developed or aged adult, are usually more serious than in the case of the robust and heavily muscled laborer. We should obtain as far as is possible the nature of the trauma; whether the patient was caught prepared or unprepared; in the former instance by contracting the abdominal muscles the patient might have been able to minimize the blow; whether the blow was from a rapidly or slowly moving object; limited or diffuse in its nature and the state of emptiness or fullness of the underlying viscera. Blows from a rapidly moving object limited as to their point of contact, for instance the kick of a horse, may and often do result in serious results. The same also obtains in buffer accidents, the compression injuries resulting from run-over accidents by automobiles or being caught between the wheel and body of a heavy wagon. Accidents in which the intestines are compressed against the vertebral column may result in that impossible condition to diagnose at the outset, separation of the intestine from its mesentery. Such a condition, unless relieved, must result in gangrene of the intestinal segment, deprived of its blood supply, with a resulting diffuse peritonitis. Naturally the question arises, how are we to diagnose such a condition? I know of no instance where such a positive and exact diagnosis has been made prior to operation, but I do know that men have, after a keen summing of the evidence presented, gone into abdomens that others have advised as not surgical and this condition has been found. A surgical colleague, with an experience in an injury of this type, informed me that he arrived at his decision to operate upon the

presence of a small circumscribed area of board-like rigidity that not only did not decrease in a few hours but persisted. Large numbers of innocent appendices, legitimate surgical prey as they are, have been removed on even less evidence.

Another point, not to be forgotten, is that a careful exploration of the entire abdominal contents should be made with the abdomen opened. The injuries that we have to deal with may be single or they may be in combination with others, and it would be a catastrophe to sew up a patient with an undiscovered rupture of the intestines after having made a careful suture of a wound of the liver. It must be admitted that an acute surgical abdomen is a problem of the gravest responsibility, each one unto itself, and that a solution of the problem is plainly up to the attending physician or surgeon.

A great deal has been said and written, some of it of value, some of it not, on that clinical phenomena known as shock. Surgical shock is something that may be discussed as to its exact *modus operandi*, but when present in injuries of this type it is something that must be treated as a clinical happening of extreme importance. One thing that we want to bear in mind is, the patient can die from shock and shock alone, and at autopsy no demonstrable lesion can be found to account for the death. An instance of this type was brought to my attention under the Medical Examiner law. The patient was working around a gasoline engine running under high speed. The belt broke, its free end flew back with a terrific force and struck the workman across the upper abdomen. He fell to the ground, gave one or two spasmodic gasps and died. Bearing in mind then that shock to a certain degree is usually more or less present in these cases, that the patient can die from shock alone, we have the practical fact to deal with that we must combat the condition by suitable treatment. This by no means indicates that one is to waste time, and precious time, fooling with a state of shock caused by hemorrhage, except to try to get a ligature on a bleeding vessel, but I mean shock as it usually occurs. It would certainly seem by this time that the foolish and irrational use of strychnine and alcohol would have been entirely abandoned. It is, however, a fact that they are by some men, from a process of reasoning that I am unable to understand, deemed of value and so given. When it is understood that they not only do not aid in the condition, but increase the very thing we would limit or prevent, we fail to see any value in using them. Morphine, heat, a Murphy drip of sugar or saline, combined with the judicious use of caffeine, offer a far more intelligent method.

Starting with the diaphragm and ending with the bladder, we find that every one of the abdominal contents may be injured. Rup-

ture of the diaphragm, a rare accident to be sure, results in a hernia of some of the abdominal contents into the pleural cavity. Fortunately in some cases the brunt of the accident is borne by the abdominal wall. This may result in only a severe bruising of the parietes; in others, owing to a rupture of the blood vessels, we may have a hematoma which may be absorbed or finally go on to abscess formation or we may have a subcutaneous rupture of the muscles. A point to bear in mind, in injuries of the lower part of the abdominal wall, is the possibility of rupture of the deep epigastric vessels. This lesion is to be suspected in case a swelling limited to the rectus sheath with an increasing pulse rate.

Injuries of the peritoneum may be limited to the parietal portion or we may have the involvement of different portions of the intestinal investments. Tears, effusion of blood, may result and finally clear up unaided. An interesting clinical fact is that we may have the disablement of the patient from traumatic peritonitis, if the term be permitted, in which there is more or less general abdominal pain, a tendency to become nauseated on the ingestion of food, extreme constipation and distension of the more or less paralyzed bowel. I recall one case of this type in which I saw the man shortly after the accident. He was kicked by a horse, the blow glancing obliquely across the right side of the abdomen. He was in severe pain, suffering from quite some shock and was very much nauseated. Commencing the next day there commenced a gaseous distension of the bowels with no stool since the accident. His pulse rate and temperature were satisfactory and his general condition very good. I accepted the condition as dynamic ileus, brought about by the blow, and treated him symptomatically. Recovery was complete in a few days and he resumed his ordinary work. We might at this point say that it should be an absolutely hard and fast rule in all cases of abdominal injury to give nothing, and by that is meant nothing by mouth, until we are assured of the integrity of the intestinal tract. This may seem a somewhat unreasonable and foolish rule to advocate, but it is playing safe. A case to illustrate that things may not turn out as they seem as if they might is a case related to me by a colleague. A man about the middle of the forenoon received a blow on the abdomen. The accident was seemingly not particularly serious, and although he was strongly advised to enter the hospital for observation he refused to entertain any such advice. He ate a particularly hearty dinner, consuming with the same a large amount of beer, and went to his usual work. Taken with severe pain later on in the afternoon, he called a physician. He was brought to the hospital in the early evening and laparotomy performed. A large rent was found in the

intestine, through which had been expelled the heavy dinner taken at noon. Death resulted in a few hours.

For the sake of convenience, injuries of the abdominal contents can be divided into those of the solid and hollow viscera. Of the former type, Johnson collected 365 cases, finding as a result that injuries of the liver occurred in 189 instances, and the combined injuries of the spleen, pancreas and kidneys were 176. The greater liability of the liver to injury is dependent upon several facts—its enormous size, its want of elasticity, its anatomical structure and position. The important factors to be considered in liver injuries are sepsis and hemorrhage. The prognosis in about any time of rupture is grave and the need of operative interference is imperative. In some early statistics, in uncomplicated cases, there was a mortality of 78 per cent., but in another group of the same type, collected later, we find the more encouraging figures of 58.6. This fact is, undoubtedly, due to a keener diagnostic sense and also improved operative technic.

Isolated and uncomplicated injuries of the pancreas are rare. In a collection of forty-five cases of pancreatic injury there were twenty-four of the subcutaneous type. Thirteen cases were not submitted to operation with a death rate of 100 per cent. Of the eleven cases operated upon there were seven recoveries. When it is found that the operative procedure was an extremely simple one; namely, exposure of and drainage of the gland, and that this sufficed to cure the patient, it is evident that we have encouraging facts to bear in mind.

Splenic injuries, from the nature of the organ involved, carry with them a frightful mortality from hemorrhage. Seventy-five per cent. of the unoperated cases in 308 cases of splenic injuries of the subcutaneous type died within twenty-four hours. The operative mortality is twenty-five per cent. and it is not to be wondered at.

Renal injuries vary from those of a slight contusion, with perhaps a perinephritic hematoma, to a complete smashing of the renal parenchyma. The usual cause is direct violence directed over the kidney, but falls and severe twists of the trunk have resulted in serious lacerations. The subsequent course of a hemorrhage into or around the kidney may be serious. If infection takes place rupture may be into the peritoneal cavity, the intestine, the ureter or point at the groin. Severe vessel injury or tearing of the ureter is fraught with disastrous results.

The prognosis of intestinal injuries assumes a gravity in proportion to the time that elapses between the time the injury is inflicted and repair is made. The symptoms given by some authors as war-

ranting operative interference are those of a diffuse septic peritonitis, a terminal state, and from a bitter experience we know what surgery means in this class of cases. There is not a man in this room who is doing an active surgical practice but will shudder as he thinks of the cases of septic peritonitis resulting from ruptured appendices. An acute intestinal rupture is even worse, for we have no limiting adhesions and every minute of time is precious. The order of injuries is, first, the ileum, then the jejunum, duodenum and large intestine, in order named. We may have a complete tearing of all the coats, laceration of the two outer leaving the mucous intact, and this is a frightful type, and separation of the gut from the mesentery. As the greater number of injuries are in the lower part of the tract, we are also confronted with the important fact that the lower down the canal the more increase in the toxicity of the contents.

We must consider the symptoms in a general way. It is impossible to enumerate a group of symptoms and say operate in the presence of such and such ones and defer if they are not present. One might try to sum up the question as follows: If in any given case of abdominal contusion there is a persistency of shock, or the same is increasing after a rational attempt has been made to combat the condition; if there is a rapid or gradual increase of the pulse rate; if vomiting persists; if there continues or develops a board-like rigidity of the abdominal muscles, especially of that board-like type; if there is rapid increase of the abdominal tension, it becomes fairly plain that operative interference has become imperative.

The following cases are fairly representative of certain points mentioned in the paper. One might infer from the history of the first case that I did not care to assume the responsibility of operation. It seemed to me that it was at the time a useless procedure.

CASE I. A boy twelve years of age and in perfect health, according to the history of his parents, met with seemingly a simple accident. While pushing hay across the floor of a barn he ran the fork against a board projecting above the floor level. The handle of the fork struck him in the abdomen, knocking him down. For a few minutes he suffered from pain and then resumed his play as usual. That night he partook of a hearty supper and went to bed feeling well. Was taken in the night with severe abdominal pain, for which hot applications and a cathartic were given. He vomited during the night, the pain increasing, but was relieved after the bowels moved for a time. By morning he was decidedly worse, and a physician was called and said that operation was necessary. I saw the boy the next day, not quite forty-eight hours after the accident. He was

moribund and died about an hour after I saw him. No autopsy allowed.

CASE II. Patient, age five, a particularly rugged child, had never had a serious illness. While playing with some children fell, striking his abdomen with quite some force on a sharp rock. He came home complaining bitterly of the pain. For some forty-eight hours there was a progressive increase in the pain and no bowel movement since the accident. The family physician was called, and I saw the child with him the next morning. At his first visit nothing but a slight acceleration of the pulse could be found. When seen by me there was a temperature of 100.2, a pulse of 120, general distension of the abdomen, rigidity and spasm of the lower recti, more marked on the right, some nausea and patient had vomited. A low enema gave a large bowel movement with a large amount of flatus. The danger of delay was explained to the parents, but they were anxious to defer operation. The patient was left with instructions as to nothing to be given by mouth, but that night, owing to the child crying piteously for water, it was given and promptly vomited. The condition did not materially change for seventy-two hours, when a marked and decided change for the worse was seen. I saw the child at 5.00 P. M. and operated at once. A large abscess was found in the lower right abdominal quadrant with a direct opening into the cecum. The appendix was not seen, neither was a search made for it. He was placed in bed with drainage and in the Fowler position. For several days he was critically ill, but made a good recovery and was out with a solid wound in six weeks.

CASE III. A girl, age six, was seen six weeks after the accident. While never a robust child, she had never had any illness in any way relating to her present illness, the history of which and the subsequent course are as follows: While running about a school room patient fell, striking her abdomen on the corner of a desk. For a few minutes the pain was severe, but then passed away. There was no nausea or vomiting. For the next few days she complained to her parents of paroxysmal pain in the abdomen, no definite localization, and a general feeling of lassitude. During the next five days there was more persistency of the pain and it was more severe. She was seen by her family physician, who made a very careful examination of the child, and beyond a slight amount of abdominal distension there was nothing of import found. The child now began to complain of continuous pain, more in the upper abdomen, refuse food, and there was a progressive loss of flesh and strength. Conditions progressed in this manner for about a month, when a small swelling of a

furuncular nature appeared at the upper part of the umbilicus. The swelling ruptured spontaneously, discharged a milky-looking fluid for about forty-eight hours which had no odor. The bowels began to get clay colored, of a putty-like consistency and intensely foul odor. The abdomen became rigid, a marked septic course of temperature became prominent, and the child was critically ill. I saw the child about this time and my notes show the following: Skin greasy and icteric, septic pulse and temperature, marked emaciation, eyes staring, board-like rigidity of the upper abdomen with a marked dull note on percussion across the entire upper part. The child was lightly anesthetized and an incision made to the left of the umbilicus, taking in the small fistula left after the rupture of the swelling mentioned above. Evidence of fat necrosis was present all over the upper abdomen. On going through the gastro-colic omentum a large abscess of the pancreas was easily found, which was filled with foul-smelling pus and a greenish slough. This was rapidly sponged out, the edges of the omentum stitched to the peritoneum and two large cigarette drains placed in the cavity. Even this slight operative procedure was hard on the child and she was placed in bed in a precarious condition. The discharge from the abscess was enormous and extremely excoriating, digesting as it were the skin if given a chance, but I was able to overcome this feature by the generous use of a weak ointment of ammoniated mercury in lanoline. This was used around the wound as often as needed and was efficient. I operated upon the child the 5th of January, and it was not until the following November before the sinus completely closed. The child now presents a picture of perfect health.

CASE IV. A boy, age seven, sustained the following accident. While riding on a low truck wagon he fell off, the rear wheel passing over his body. He was taken home, the family physician called, and I saw the case with him within two hours after the injury. The child was conscious and gave a very intelligent account of the accident. The indications for entering the abdomen were as follows: a board-like upper abdomen, an increase in the abdominal distension which was very apparent, and a rapid and steady increase of the heart's action. The abdomen was opened in the median line to the right of the umbilicus. Whether the kind of injury has any bearing on the matter or not, a point that impressed us was the enormous dilation of the vessels in the peritoneum. The blood was expelled with great force from the abdomen, the peritoneal cavity being opened. A deep rupture of the right lobe of the liver was found, extending from the diaphragm to the free border. A reverse Trendelenburg brought the liver wound into easy position. It was sutured with deep and super-

ficial sutures, interrupted, of iodized gut. This made the hemostasis complete and the wound was closed without drainage. The remaining contents showed no signs of injury. The recovery was complete and without import.

CASE V. This child, a boy of six, was caught between the body and wheels of a heavy truck. I saw him in a few minutes and found him in a state of shock, pulse rapid and weak and getting very much worse, an area of ecchymosis on the left side of the abdomen from the ribs to the iliac crest, marked rigidity of the abdominal muscles and an abdominal distension that was increasing. Immediate operation seemed to be the course to advise and this was done. The mother not caring to assume the responsibility until the arrival of the child's father, some hour or so later, we waited until that time. On the arrival of the father operation was out of the question. The child was pulseless and died in a short time. In this case one might have been able to save life by operation. I would have accepted the chance, grave as it was, but it appears probable that even that would have been of no avail.

CASE VI. A healthy, rugged type of man, age forty-nine, was injured in a peculiar manner. In attempting to hold a small heifer, while some porcupine quills were being removed from the animal's face, the beast gave him a sudden twist to one side and then fell partly on him. Beyond a feeling of some pain and tenderness in the left dorso-lumbar region, he experienced no serious trouble for some two weeks. About this time he began to have pronounced hematuria, severe pain in the region of the left kidney, and was unable to work. A cystoscopic examination was made by another surgeon, and the diagnosis of probable malignancy of the bladder made. He went to Montreal and placed himself under the care of a surgeon of whose ability and judgment one must entertain the highest opinion. Catheterization of the kidneys showed free blood from the left ureter. The kidney was cut down upon and the condition found seemed to warrant the operator in performing a conservative piece of work, so the rent in the kidney was sutured and the patient left the hospital in three weeks, feeling well and with urine free from blood. Some three or four days after reaching home he began to pass blood freely, and this increased so that he began to show plainly the effects of the hemorrhage. He was seen in the night by a colleague, who advised his coming to the hospital. I saw him some four days after the hemorrhage had commenced and found him in a very poor condition, temperature 101.6, with a pulse of 110 of decidedly poor quality. He was placed upon a continuous Murphy drip, an ice bag over the kid-

ney, and morphine used *q. s.* His hemoglobin was 60-70 per cent. Forty-eight hours later he showed a marked improvement and I removed his left kidney. There were three distinct tears, one going directly into the pelvis. Owing to the previous operation there was marked adherency of the capsule to the surrounding tissues. Fearing trouble from the renal vessels, I removed the organ according to the method advocated by Gerster, excepting that I could easily get the pedicle, so was not obliged to leave on a clamp or use the elastic ligature.

DISCUSSION.

DR. WAKEFIELD, of Bar Harbor: Mr. President and Gentlemen: I think Dr. Jackson should be congratulated on his excellent paper. The subject of this essay is certainly timely and important. I think it is of equal importance to the medical man and the surgeon; in fact, I think it is of the utmost importance that the general practitioner should realize the great seriousness of abdominal contusions, because he is the one who usually sees these cases first, and upon his judgment, whether sound or poor, lies in a large measure the outcome of the case. When serious injury has been sustained by the abdominal viscera, especially rupture of the intestine, every hour that goes by without proper surgical treatment greatly lessens the chances of recovery, just as it does in acute intestinal obstruction. Therefore, it is of the greatest importance, as Dr. Jackson has so forcibly pointed out, that prompt and proper treatment be instituted without delay. The class of cases that taxes the judgment of the surgeon the most is not the obviously hopeless cases, nor yet the mild ones requiring no surgical interference, but the cases midway between those two extremes. I believe, after a very careful study of the case and consultation with colleagues, if the surgeon is still in doubt, is justifiable to make an exploratory incision.

There is one suggestion I have to make in the treatment of abdominal injuries, in addition to those recommended by Dr. Jackson, and that is the hypodermic use of morphia. It is best not to use it until diagnosis is made and the method of treatment decided upon. Then, I believe, the judicious use of morphine is of great value to relieve pain and shock, and quiet intestinal peristalsis. If you will pardon a digression, it is a well-known surgical fact that many cases of acute appendicitis can be safely carried through by starvation, the ice-pack and morphia. The main object of this treatment is to quiet the intestines and keep them quiet. It is of equal importance in bowel injuries to treat them with morphia.

DR. W. H. BRADFORD: Dr. Jackson has stated the facts in connection with the subject so clearly, and so completely, that it seems to me that there is very little to be added to the subject. Perhaps some points may be emphasized to advantage. Among others, I will say that the necessity of an early diagnosis as to the extent of injury is desirable. I will also say that in probably a very large majority of cases a positive diagnosis is absolutely impossible, and, unless the symptoms are extremely favorable, the patient should be subjected to an exploratory abdominal operation. The attending physician should not wait until symptoms have appeared which show that some serious trouble is going on in the abdomen if there is to be any hope of a successful issue in the case. Some of the early severe symptoms may subside, and the attending physician may feel that

his case is progressing satisfactorily, even in some of the severest cases of abdominal injury, and after a few hours the symptoms become worse again; and, if the case has not been operated on up to this time, these increasing symptoms certainly call for an immediate opening of the abdomen. I think it should be remembered that operations in this class of cases may be among the most serious operations we have to do. One should be prepared to meet any possible emergency,—the necessity of re-section of an intestine, the necessity, if possible, of suturing the solid viscera, or, if one of the viscera is too severely injured for suturing, even its removal. I say that particularly of the spleen and the kidney. I want to emphasize the fact that immediate surgical intervention is essential if we want to save the life of our patient in these serious abdominal injuries.

Dr. Jackson has mentioned the existence of shock. That occurs to a greater or less extent in almost all abdominal injuries. According to Criel, this shock is due more to the transmission of the concussion from the abdominal parietes to the under surface of the diaphragm. The shock in mild cases subsides soon and does not recur. Vomiting is frequently a prominent symptom in the early stages of abdominal contusion, and in mild cases subsides not to recur. Where serious injury to abdominal viscera has occurred, the vomiting is likely to come on again and is an urgent indication for an early operation. It should be remembered that every case of abdominal contusion, however simple it may appear, should be carefully watched, not only for a period of days, but perhaps over a period of weeks. (Applause.)

PRESIDENT HOLT: The paper is now open for general discussion.

DR. SAWYER, Fort Fairfield: Mr. President, I feel very much interest in this paper of Dr. Jackson's. I think it is one of the most important subjects that a surgeon is called on to deal with. Of course the great question is when to operate and when not to operate in these cases. Many of us have regretted making the operation, but I have regretted many times that I did not make it. So I think that if we are going to err at all we had better err on the safe side. With all surgical precautions taken in opening the abdomen, you have not endangered the patient's life, as I consider it, at all, and you may save many lives by doing that. Symptoms and shock vary to a great extent; so I say, with Dr. William Warren Green in speaking of fractures: "If you are in doubt, call it a fracture." And I say about these abdominal injuries, "If you are in doubt, operate."

DR. A. L. STANWOOD, Rumford: Mr. President: Just one word! The tendency of all surgeons is to operate upon all of these cases if they get a chance. They seem to leave out the great question of diagnosis, of judgment; whether to operate or not to operate. The medical profession, as a rule, has for the last twenty-five years been tending so largely toward the surgical view point of all cases that they lose that fine technique of discrimination, whether it is right to operate or proper to operate. I have seen a great many contusions of the abdomen that have gotten well by proper medicinal treatment. For instance, all of us have had a great many contusions resulting from kicks by horses, and it is a very common thing in my country, where so many are used in the logging business, to have men brought in from the woods who have been kicked or injured severely in the abdomen. They will come in almost dire extremity, that is, as far as the symptoms go, but most all of them get well and few of them are operated upon. So it occurs to me that sometimes we recommend an exploratory incision for want of a thorough diagnosis. We seem to think the injury to the

internal organs is more severe than the exploratory incision will reveal. I can cite one case that I had. A young boy was driving a team ploughing. Some trouble occurred with the harness, and he had a goad stick driving the horse. The horse kicked, struck the end of the stick, and it came against his abdomen. The boy fell down and everyone supposed that it was a fatal case. Upon proper medicinal treatment the boy made a perfect recovery. Unquestionably, had he been where there was a surgeon handy, an exploratory incision would have been made, perhaps, as Dr. Sawyer has said, erring upon the side of the operation—the incision. So the point I wish to make more especially is that we as a profession should develop our diagnostic mind and technique. I feel sometimes that we go a little too far in operating. I believe the method of diagnosis and the judgment of the physician is being lost sight of, and that we give way to the surgeon a little too much.

DR. SAWYER: How are you going to make a positive diagnosis?

DR. STANWOOD: It is not always necessary to make a positive diagnosis. I will agree with one speaker that continuous vomiting is a very bad symptom, and should I have a case where continuous vomiting occurred, I would advise an operation. Dr. Greene always said that vomiting was a mighty good sign and one he always wished to see in abdominal contusions—it showed a reaction—and I well know and remember his advice upon such things.

DR. BENNETT, Lubec: Mr. President and Members of the Association: This paper brings to mind certain cases I have had in my practice, and one in particular; and I must say that the recollection of that case does not come to me with a great deal of pleasure, because in connection with that I am forced to think of a widow and two orphaned children. This accident happened to the father. He was working in a saw mill, and the stick that was being cut sprang back in some way and struck him across the abdomen. Now, gentlemen, the symptoms in that case at first were very illy marked; they were not distinct; and it seems to me that here was a border case. Perhaps Dr. Stanwood could have made a correct diagnosis, but I want to admit right here and now that I failed to make that diagnosis. It did not seem justifiable to recommend an operation, and an operation was postponed until that vomiting said so plainly that it should be done that it then was too late. Is not this the dilemma that we are in a good many times, especially those of us who are unfortunate enough to be away from hospitals and away from specialists? Now, gentlemen, I want to say that personally I feel, and feel very acutely, that the safe side here is on the surgical side. If I am wrong, I hope some of you will correct me. (Applause.)

DR. C. E. SYLVESTER, Harrison: Mr. President, I heard Dr. Bennett's statement as to injuries in saw mills. It is my experience that those are the most common causes of the dangerous contusions of the abdomen. One case occurs to me, and I wonder if others have had the same experience. A man was struck across the abdomen by a slab from a saw, leaving no mark whatever. In a few hours his pulse showed suspicions to me and I had him taken to the hospital, but he died just as they got him on the table from hemorrhage. The man had an insurance policy, requiring, as all those contracts do, external evidence to show where the blow was struck. The father failed to recover the insurance because there was no mark externally to show where the blow was struck. It was a good case for a suit, but they did not bring suit. I believe, myself, that there are so many of these cases that are in grave danger that it is foolish to wait too

long to get a positive diagnosis. The difficulty of such diagnosis is so great that the pulse, it seems to me, is the best guide we can have. I, myself, should hate to wait for vomiting. In the matter of pulse, I will say, as I did in this case referred to, that I did not know. It seemed to me that the pulse was not quite so good as it ought to be.

DR. S. C. GORDON, Portland: Mr. President: I want to say a word on the doctor's paper. I did not hear it because I was detained, but I have had considerable experience myself in cases of this kind, especially, as Dr. Sylvester has said, in saw mills. I have had at least two cases where a slab was thrown against the abdomen without a single mark anywhere, the only indication being that the pulse was at once depressed, and I made a prognosis at once unfavorable. The result of it was that in about twenty-four hours the man was dead, and without a single bruise on him at all. In another case I was called to Berlin, New Hampshire, to the sulphite mill, where I found one of the officers of the company who had accidentally received a blow from a piece of pulp. They telegraphed me at once to come up. As soon as I got there, I said that the man was moribund then. One other case that I recall: This case occurred quite a good many years ago when I did not know as much as I did later. I felt that the man was absolutely going to recover, but very much to my chagrin he died within twenty-four hours after the accident. These cases are comparatively common, occurring mostly in mills and institutions of that kind, and I should hesitate now but a minute before I did the very best thing that possibly could be done. I do not know as there is anything that ever can be done in those cases, and they are certainly very deceptive to one who is not accustomed to that sort of thing and who does not, first of all, see whether the pulse is failing or not. If you find it is at low ebb, make your prognosis at once, no matter what you may attempt to do. Make the prognosis unfavorable always in that class of cases.

DR. STANWOOD: Do you believe an operation would save those cases?

DR. GORDON: I do not believe it would do a bit of good; in fact, in this case at Berlin the friends wanted me to operate. They were very insistent. They said, "Doctor, we have sent for you to come this long distance, and now you must do something." I said, "I do not want to kill this patient. If I should make an abdominal section here and the patient should die, as he certainly would, then you would say, 'I am sorry we sent for Dr. Gordon'." So never give a favorable prognosis in any of those cases where the blow has been flat against the abdomen, for they are just as sure to die as though their throats were cut from ear to ear and the blood vessels involved.

DR. DICKISON, Houlton: Mr. President, the great question, of course, is whether to operate or not; and, as far as I have been able to find out, there is no rule to go by. It is merely a matter of sizing up the situation and the patient's condition and surroundings. I have an instance in mind where a man was riding on a horserake with the reins around his neck, and fell off, and the iron piece that comes out from the horserake entered the rectum. Two hours afterwards the man had a fairly good pulse, but there was some rigidity of the abdominal muscles. They said that the iron had entered the rectum, and that was the only thing to go by. After consultation and careful examination we concluded to open the belly, and we found two holes in the bladder and two in the intestines, and of course you all know what would have happened to the man if we had not opened him at that time. The important point was that there was absolutely

nothing to go by except the story that the iron had entered there. There was some rigidity, but we would have expected some rigidity anyway. So the character of the injury has to be taken into consideration, and the patient's condition as we see it is not always enough to make a diagnosis on. I want to say, in the case that I have cited, that the iron in entering the rectum left no sign of any injury.

I had another case very similar and very unusual. A swamper in the woods reached down and cut off a stick where he was standing on the log (cut it off slantwise), and in a few minutes he sat down on it. I saw him six hours later, and at that time we opened the belly. They told me the stick entered the rectum, but when we opened him up there were eight or nine holes in the intestines which we sewed up. There was one hole that I did not find. That one was in the diaphragm and entered the lung. The man lived sixteen days, and at the autopsy the abdominal cavity was cleaned out. There was no indication of such extensive injuries in the man's condition when he came in. The stick penetrated nearly eighteen inches. So far as I have been able to observe, it is absolutely impossible to be guided by the patient's condition alone. The amount of shock that you get does not always indicate the amount of injury. In the case that Dr. Gordon has mentioned, the shock was greater than the physical injury, perhaps, and he received a different kind of injury. In the case that I have related there was a lot of destruction of the tissue, but a very little shock to the nerves; so the man did not show the amount of injury he had. One of them died anyway, and the other would have died if he had not been opened. On the other hand, it is not necessary to open the abdomen of everyone who gets an abdominal injury. The crucial point to decide is when to operate.

DR. MINER, Calais: Mr. President: I was rather surprised to hear the stand taken by our friend, Dr. Stanwood. It seems to me that every abdominal injury should be considered, unless proven to the contrary, a surgical condition. It has been my pleasure, or perhaps my misfortune, to have had perhaps six or eight cases recently of abdominal contusions. In the cases where we instituted almost immediate surgical treatment, the patients are living monuments to testify in our favor. In those cases where conservatism was practiced, we haven't anybody to testify in our favor at all; they are gone. A case came in of considerable importance from St. Andrews to the hospital, and he had, as you will all agree, a very able man to take care of him—Dr. Webber, the much lamented man from Calais, and as careful and conservative a man as there was to be found anywhere in the county, and perhaps in the state. He recommended conservatism. The man was brought in more as a matter of routine by his rich employer, to be watched. There were no abdominal signs, no vomiting, practically no shock. He watched him for two days, and on the third day I saw the patient and recommended immediate operation. On the fourth day he had an acute "blow-out" in his intestine, which later we found.

No. 2. The patient was in such shock that he died the following day; positively a condition where the intestine was injured between the shoe of the horse and the spinal column, seemingly a very trivial case.

Another case, referred by Dr. Crane of Dennysville: A child coasting down hill was run into by his comrade; sled struck him in the side, a very small mark; a very large hematoma present. We did an exploratory, cleared out the hematoma and packed it. I would recommend in those cases, having had some experience in that line, that if sponges are used to control hemorrhage, they be

sewed together, or one sponge used. We had a case come into our hospital not long since for a secondary operation, the former operation having been done in one of the larger cities of the state. The patient had had a permanent sinus for over a year. All we did was to take a long pair of forceps, pull out a sponge, and he got well immediately.

An express messenger came in who had fallen on his revolver and injured his side; he thought it trivial. I did an exploratory after he got over the immediate shock, and found the kidney lacerated between the middle and upper third into the hilum, showing the cause of the hematuria. I packed the wound, thinking to save the kidney, but I found it necessary in three days to go in and remove the kidney. Conservative treatment in that case I think is justifiable even if you have to do a secondary operation. I recommend, therefore, Mr. President, in all these cases, as soon as shock is relieved, to do an immediate exploratory operation.

PRESIDENT HOLT: I do not pretend to know all who are qualified to speak on this question. I wish we might hear more like Dr. Miner.

DR. DONOVAN, Lewiston: Mr. President and Gentlemen: I did not hear the paper that is under discussion. I understand it to be in reference to abdominal injuries. I am reminded of a case that occurred in my practice some years ago, an injury to a young man who was running a hand truck up an inclined plane and through a wide doorway. While he was doing that he was looking behind him and keeping up conversation with some of his friends. The result was that he struck against the side of the doorway and the handle of the truck struck him in the abdomen. He fell to the floor as if he had been shot, so I was told. I found him twenty minutes later and he was in profound shock—rigid abdomen, pulseless, and cold. I gave him a dose of morphine hypodermically, had him taken to his home and recommended immediate abdominal section. That was refused because his mother was in Rhode Island, and his sister, or other relative, absolutely refused interference. He rallied from the shock under the influence of the opiate, and the mother arrived at two o'clock in the morning. At that time he was dying. I obtained a post-mortem, and found that he had ruptured the duodenum three inches below the stomach. The opening was in a longitudinal direction and would admit the finger. Whether or not he would have recovered if surgical interference had been permitted, of course I do not know.

I remember another case that occurred in the town of Rumford, I believe, to a man twenty-five or thirty years of age, of splendid physique, six feet in height, and weighing two hundred pounds. He was descending from a high wall, and used a crowbar to assist himself in descending to a lower level. The crowbar passed down between two large rocks, and held it in such way that the crowbar could move in two directions, but not in the other direction, passing down between the two large stones where there was a crevice between them. He fell in making his descent and at about the external ring the crowbar entered the canal. It passed upwards into the body eighteen inches. He fell over with the crowbar, was alone at the time, and was able to pull the crowbar out of his body. He then made his way to a physician's office, found the physician he wanted absent, and searched for another, who advised him to immediately go down to a hospital at Lewiston. I found that evidently a portion of the skin had been carried away at the opening, and in tracing up the wound, I found it passed up in the course of the rectus muscle from the canal, but did not enter the abdominal cavity; also portions of his clothing were deposited at the very end of

the wound. The wound was opened and cleared out and he made an uneventful recovery.

I remember many serious injuries to the abdomen, and judging from my own experience, as well as that of others, I am convinced that in all abdominal injuries where there is any suspicion of grave injury, even if the symptoms do not seem to warrant it, as soon as the shock has been recovered from, the safest course is to resort to surgical exploration. When properly done, of course, it does not contribute much to the character of the injury, and many times results in saving life.

PRESIDENT HOLT: I will call on Dr. Jackson to close the discussion.

DR. JACKSON: There is one little symptom, Mr. President, that I would like to call your attention to that came out a year or more ago in the work on gynecology and obstetrics by Dr. Claybrook, of Maryland. Dr. Claybrook says that, in cases of ruptured intestine, ruptured gastric ulcer, acute appendicitis, etc., that ninety per cent. of the cases, if the stethoscope is placed on the abdominal wall, you will get a transmission of the cardiac and respiratory murmur. In a large series of cases he found it lacking in very few instances. It is absolutely worthless in cases of chronic effusion into the abdomen, such as tuberculosis, peritonitis, or anything like that.

I think Dr. Stanwood is to be congratulated on his diagnostic ability. I haven't it, and I don't know any of my surgical friends who possess it. He says "proper medical treatment." If a man receives a contusion of the abdomen he either gets an injury or he does not. If he does not, any medical treatment is proper. I have no argument for the surgeon. It seems to me that he has one object, to save life. Every one of these injuries presents a serious problem. We have all got to guess in a certain number of instances. If we are fortunate, like Dr. Stanwood, and guess right, as Dr. Miner says, we may have some monuments to our skill or our ability to guess. If we practice so-called conservatism, whatever that may be, we may have some people die who, if we had opened their abdomens, might have lived.

Dr. Dickison's and Dr. Donovan's cases have absolutely nothing in reference to the condition I have discussed before you. They are penetrating wounds of the abdomen. If we open that discussion, we can go into knives and bullets and the whole thing.

I do not think any man would assume to say positively when to go into the abdomen. It is a question of brains; it is a question of judgment. The thing I have tried to bring to your attention is this: Do not, because somebody has received a trivial wound in the abdomen, say that it does not amount to anything, and give that patient some morphine, and go away.

As regards Dr. Miner's point about operating when the shock subsides, if he will tell me when shock will subside in a case of ruptured liver or ruptured kidney, where the hemorrhage is profuse, I should be very glad to receive that information.

In regard to the morphine question, I do not, and did not, intend to convey the idea that I advocate its reckless use. I simply say that as a remedy in shock, I know of nothing that will beat it. It certainly has alcohol or strychnia, or any of those things, "beaten a mile."

I want to thank you for the discussion. I am sorry my friend, Dr. Stanwood, has the opinion that surgeons are obsessed to open abdomens. I think it takes more brains to say when not to. (Applause).

*ASTHMA IN CHILDREN.

By F. P. WEBSTER, Portland, Me.

Most physicians not infrequently are called upon to treat children with asthma. It is my opinion that there are a number of common misconceptions of this condition, for example that asthma is a disease, that treatment is of little use except to ameliorate attacks, that removal of tonsils and adenoids offers a hope of cure or that change of climate is often necessary for relief.

The facts that prompt me most to present this paper are that asthma in children is generally promptly relieved and cured by persistent proper effort, whereas unrelieved patients are doomed to years of suffering and semi-invalidism.

I have records of twenty-eight patients with asthma observed within the last four years. I would divide these cases into three groups:

1. Those due to anaphylaxis, for example, hay fever, food poisoning.
2. Those due to intrathoracic disease, particularly enlarged glands.
3. Those due to a disturbance of the general metabolism.

In my series of cases, three were caused by anaphylaxis, all from egg poisoning. I have not seen hay fever in young children. It is possible, however, that obscure anaphylaxis not infrequently contributes in the production of asthma.

Four of my patients had intrathoracic disease; three, tuberculous tracheobronchial lymph nodes; one, an enlarged thymus gland.

Twenty-one, or 75 per cent., in my judgment, belong in the third group, that is an improper chemistry of the body. Most of these patients had other evidences of disturbance of metabolism, as follows: Eight had eczema, six had so-called rheumatic pains, eleven had acute digestive disturbances in infancy, four had infantile convulsions, four had attacks of cyclic vomiting, two had functional albuminuria. Twenty-five, about 90 per cent., showed evidence of either enlarged tonsils or adenoids, which conditions I look upon often as manifestations of faulty metabolism.

The age of onset is of interest. In five, the first attack was during the first year of life; in twelve, during the second year; in six, during the third year; in five, after the third year; in all, before five years of age. All my cases appearing under one year were plainly

*Read before the annual session of the Maine Medical Association, at Portland, Me., June 7-8, 1916.

caused by injury to digestion and metabolism through unsuitable food. The frequency of origin from one to three years of age, I would ascribe largely to common carelessness in feeding during this period. That other factors enter into the etiology is certain. Some would group these other factors into the term diathesis. Individual differences, to my mind, is a more satisfactory designation. It is generally recognized that young infants are all individuals, with differences, and this fact is given consideration in infant feeding. Children, however, as far as their feeding is concerned, are considered all alike. In my judgment many of the disturbances of childhood endure through failure of recognition of individual differences.

The symptom, asthma, is too familiar to need description. In seven of my patients the symptom was present practically constantly; three of these had tuberculous bronchial glands, one had enlarged thymus, three were attributed to a metabolic error. In 75 per cent. of the cases the symptom was periodic, occurring generally for a few days, once in a few weeks or months.

Asthma should be regarded as a symptom rather than a disease, and the different causes of asthma should be considered in any case. A diagnosis of tuberculous glands may be made from the family history by d'Espine's sign, namely, increased whispered voice extending below normal limits along the spine, by the X-ray and by tuberculin test. It seems to me that the Von Pirquet reaction is very valuable in diagnosis in young children. In the first few years of life a positive Von Pirquet reaction usually means that the condition under consideration is a tuberculous one. Since the tracheobronchial lymph nodes are involved in practically all cases of tuberculosis in young children, a positive Von Pirquet reaction means at least tuberculous bronchial glands.

Some believe that asthma is frequently caused by anaphylaxis. Such does not seem to be the case in young children. Hay fever is rare at this age. I have tested for anaphylaxis, four cases with asthma that did not yield promptly to dietetic and hygienic treatment. In these cases the skin test was tried to determine any sensitization to milk, egg and horse proteid. These tests were negative. The proteids of these food substances are among the most frequent causes of anaphylaxis, but there are a great many forms of foreign proteid that might produce anaphylactic phenomena. Moreover, anaphylaxis may be too obscure to be revealed by skin reaction. My three cases of asthma from egg anaphylaxis were evident from the history.

In 75 per cent. of my cases faulty metabolism appeared to be the one underlying condition. Just what constituted the metabolic error is not certain, but as stated by Kerley, the fact, that excellent results

are obtained chiefly through the withdrawal of carbon containing, or highly energized foods, makes it seem probable that the essential error lies in the giving of food containing carbon in excess of the individual power of oxidation. Kerley cites the theory of Francis Hare as follows: "Carbon intake must be offset by carbon expenditure, or energy intake with compensating energy expenditure, if 'hyperpyremia' (excess of fuel in the blood) is not to occur. When physiologic functions are deficient in maintaining a balance, and an excess of carbon or hydrocarbon is not wholly applied in the manufacture of additional fat, bile, milk or other secretion, or lost by exercise, menstruation (or some other normal outlet of energy), a pathologic function is then necessary to free the system of its excess of fuel. As such so-called pathologic functions, Hare mentions gout, migraine, gastralgia, bilious attacks, epilepsy and asthma. These attacks of migraine have been observed alternating in the same individual with attacks of gout; gout has subsided with the development of glycosuria, and women (according to Garrod) show greatest liability to the development of gout shortly after the menopause, one decarbonizing process replacing another."

Kerley states further that "Eczema, spasmodic laryngitis, cyclic vomiting, recurrent bronchitis and asthma are all notoriously frequent in children of gouty or rheumatic ancestry. All these conditions are met less frequently and with diminishing severity at the age of puberty, when the processes of combustion and tissue building are at their maximum. While two or more of these so-called pathologic functions are not ordinarily observed simultaneously in the same child, not a few children suffer from a number of these conditions in alternation over a period of years; in other words, the processes seem to be mutually compensatory. In the winter months, when activity is lessened and perspiration is least, every one of the conditions mentioned is intensified."

The work of Crile, expressed in his article, "The Kinetic Drive," adds to my mind something of value in support and addition to this theory. According to Crile, every expression of energy produces acid. Under normal conditions these acids are eliminated without harm, through the lungs, bowels, kidneys and skin. When energy is transformed in excess, or elimination is insufficient, a pathologic condition results, namely, an acidosis. In this case oxidation is reduced or arrested, according to the degree of acidosis.

These theories would explain the success of the treatment as outlined by Kerley. The indications are as follows:

1. To keep the carbon-containing foods within the oxidizing power of the individual.

2. To promote normal expenditure of energy by active and passive exercise.

3. To prevent abnormal expenditure of energy as from excitement, fright, fatigue.

There is, I believe, no particular value in discussing at this time the treatment of asthmatic attacks. Of most importance is the interval treatment directed toward lessening and preventing further attacks. The results obtained by the Kerley interval treatment have been a revelation to me. I have seen cases of several years' duration rendered free of asthma within a few months. The most important factor by far is regulation of the diet. Fats and sugars must be reduced in proportion to the severity of the case or to its resistance to treatment. No cow's milk fat should be given, no cream, ice cream or butter. Favorable cases may have not over one pint of skim milk daily. Severe cases should have no cow's milk whatsoever. The yolk of egg is omitted and the whites of two eggs substituted for a whole egg. Cane sugar is not allowed and saccharin is used for sweetening.

Cereals, breadstuff and other starches, green vegetables, meat and fish and the whites of eggs are the essentials of the diet. I have found it best to allow cooked prunes or apples, sweetened with saccharin, but once a day. Puddings made from tapioca, cornstarch, rice, sago, skim milk, whites of eggs and saccharin are generally used. Kerley advises red meat to be given but two or three times a week. High proteid cereals and purees of peas and beans are indicated. Cooked green vegetables should be given freely, likewise all breadstuff suitable for the age. Eating between meals must be prohibited.

A movement of the bowels must be secured daily, usually by a laxative. It is well to weigh the patient every couple weeks.

Exercise is very important and out-of-door life should be encouraged as far as possible. Any agreeable exercise with avoidance of fatigue is suitable. In the winter months it is well to employ gymnastic therapeutics in accordance with the age and possibilities of the patient. Daily massage and passive exercises are of distinct service. A period of rest should be held in the middle of the day. At bedtime it is best to employ a warm bath, followed by a brisk rub.

Kerley advises the employment of sodium bicarbonate and salicylates, alone and together, continuously over long periods in some cases and intermittently in others. I have not been most favorably impressed by this plan of treatment, which I have often tried. It is my feeling that iodides often work well, and that they may have the

power of distributing energy to advantage. Frequently adenoids and occasionally tonsils should be removed, but to say the most, such operation alone seldom produces cure.

Of my patients, two of the three with tuberculous bronchial glands were cured, likewise the cases of egg anaphylaxis. The patient with thymic asthma did not have the benefit of X-ray treatment, and was found dead in bed at three years of age. Of the twenty-one patients whose asthma was ascribed to error of carbon metabolism, three are unrelieved, five have been considerably relieved, and thirteen I consider cured. The unrelieved and partly relieved cases may have some obscure form of anaphylaxis, but it is my opinion that for the most part their treatment has not been sufficiently thorough.

In conclusion, I would state that treatment, such as has been outlined, will cure a much greater proportion of asthmatic children than any method previously employed; that asthmatic tendencies should be recognized early, since early cases respond best to treatment.

DISCUSSION.

THE CHAIRMAN: The discussion of the paper will be opened by Dr. R. B. Moore, of Portland.

DR. MOORE: It seems to me, Mr. Chairman and gentlemen, that Dr. Webster has done very well to emphasize the importance of errors of metabolism as a factor in the causing of asthma. The etiology of asthma is the most interesting part of it. The fact that Dr. Webster spoke of a majority of his cases occurring between the second and third years of life, I think is significant. In children who have shown signs of disturbance of metabolism in infancy, and have presented defects in infant feeding, there are usually more or less of the symptoms grouped under the term, gouty diathesis. There is a tendency to eczema infections and other skin manifestations, all of which can be corrected in infant feeding by a proper limitation of the fatty intake. When these children have been carried along, and have reached the age of nine or ten months, or a year, or eighteen months, we will say, there is generally a relaxation of the supervision over those children. They are well started on their career, and the supervision of their food is left more to the parents, with a consequent indulgence in certain things that should not be permitted, and I think that this may have something to do with the appearance of asthma at that time. It is undoubtedly true that those children who have eczema, and who have a family history of what is called the gouty diathesis, or the tendency to rheumatic troubles, are the ones more apt to develop asthma, and when they are allowed sweets, cakes and candies, and one thing and another, they are very liable with their first attack of bronchitis to develop asthmatic symptoms, which, if not corrected, will develop and become progressively worse. The success in treatment, of course, depends entirely on finding the cause of the trouble and removing it. Those who have asthma due to anaphylaxis, if you can find the cause, generally it is very easy to cure them once and for all. In the hay fever group, it is not so easy, and in those who have the gouty diathesis, it is a difficult matter, requiring a long period of time to overcome. The prognosis is better the earlier you get the chart, and if with the first attack proper treatment can be insti-

tuted, there is a very much better chance of finally overcoming the trouble than where the condition has been existing for several years. The few cases that I have been able to observe have responded very readily to the treatment outlined by Kerley, and I have had good success with that; in fact, it is the only treatment with which I have had any experience. In my own few cases it has worked very satisfactorily. Of course, children coming from parentage where there are marked nervous tendencies are apt to have more easily irritated nerves, and I feel convinced may have asthma during bronchial attacks simply on account of those nervous tendencies. In proof of what I have stated, I know of two cases in children where there has been prolonged asthma, which yielded to no particular line of treatment, and finally responded, when the child later became interested in Christian Science, in a very prompt cure. I do not think we can properly attribute that to any disturbance of metabolism. In all other things I think I must agree with all that Dr. Webster has said.

THE CHAIRMAN: If there is nothing further to be said on this paper, that closes the program for this afternoon.

DR. WEBSTER: Mr. Chairman, I am very glad that Dr. Moore brought out the frequency with which asthma starts in the second year of life. Very often children have had trouble in the first year, and it is those children who have to be particularly careful in the second year of life. Another thing about this form of treatment, after relief is obtained, is that it is essential to get the child gradually on to an ordinary diet, if possible. The restricted diet is not to be continued forever.

*THE USE OF THE DUODENAL TUBE.

By RICHARD F. CHASE, M. D., Portland, Me.

The duodenal tube was devised by Einhorn in 1910, originally for diagnostic purposes, *i. e.*, for the purpose of obtaining the duodenal contents—food, bile, pancreatic juice, etc. Several writers have attested the value and practicability of the tube for the above purposes. The tube may also be used for obtaining the gastric juice in cases in which it is not desirable to use the larger stomach tube.

Einhorn¹ soon began to use the tube for duodenal feeding and advised feeding by this means in all cases in which it is desired to rest the stomach, and in which, for some reason, the food is not retained or well borne by the stomach. "Indications include gastric

*Presented at the meeting of the Portland Medical Club, February 1, 1917, at which occasion the author's device of duodenal tube and feeding apparatus was shown.

¹Einhorn, A Practical Method, etc., Med. Record, N. Y., January 15, 1910; Med. Record, N. Y., July 16, 1910.

and duodenal ulcer, marked atony of the stomach, nervous vomiting, persistent vomiting of pregnancy, etc.”

The use of the tube has been found of value in the treatment of all these conditions, but its greatest field is probably in the treatment of medical cases of gastric and duodenal ulcer. For the treatment of ulcer the duodenal tube is being used quite extensively by certain internists and gastrologists, and a considerable number of writers are advocating its employment. Thus far sufficient time has not elapsed to enable anyone to report on the results of treatment of a considerable number of cases, consequently we do not know the percentage of cures by this method of treatment.

This method of treatment seems to fulfill, better than any other medical method, the requisites of medical treatment, viz., rest of the stomach, ample nutrition, the reduction of the secretions, and no hardships to the patient other than confinement. Judging from my own limited experience with this method, I can assert that all of these conditions are amply fulfilled.

Gross and Held¹ state: “We have in duodenal alimentation a very substantial addition to the old established methods of internal treatment of gastric and duodenal ulcer. The method is simple, and feeding is readily accomplished. It is sometimes asserted that in the case of persons who earn their daily bread and have not the time to undergo a regular ulcer treatment it is best to operate.”

That this argument is not logical is self evident. First, surgical treatment involves a longer time than the medical for a complete cure. Secondly, the final results of surgical treatment of uncomplicated ulcer are no more favorable than those of medical treatment (by this method). Finally, the direct mortality danger involved in operative procedure, even if only a gastroenterostomy is done, is still from 2 to 4 per cent. (in experienced hands).

In the article by Gross and Held is fully described the duodenal tube which they use, also the full technic of its introduction, feeding, etc. Einhorn also fully describes his tube and gives complete technic of its use, in the two articles to which reference has been made. These outfits can be purchased in some of the New York surgical instrument stores, or a man with ingenuity can rig up an outfit for himself after studying the various descriptions.

A personal word of explanation regarding this method of treatment of ulcer may not be out of place. This method of treatment need not supplant all other medical methods, but it probably is superior to all others in the average case. One might hesitate to use it in

¹Gross and Held, Jour. A. M. A., August 7, 1915.

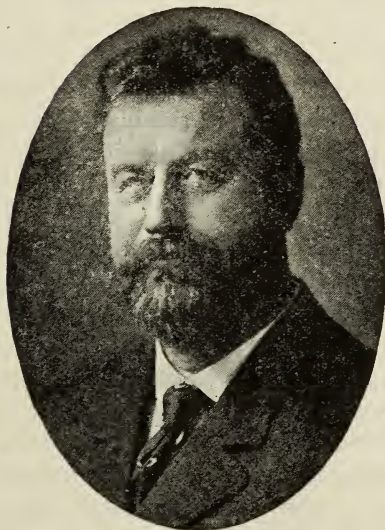
cases with much bleeding. Here the use of the tube may be postponed for a day or two and rectal feeding employed until the bleeding ceases. In cases with pyloric stenosis, surgical treatment is to be employed, as in the past; in fact, the duodenal tube cannot pass to the duodenum if there is marked stenosis of the pylorus.

Surgery has been and is yet much employed in the treatment of duodenal ulcer. Many may believe it the only appropriate treatment. Personally, I share the belief of others who have had experience in the treatment of these cases with duodenal feeding, and that is, that all acute or chronic duodenal ulcers, uncomplicated by pyloric stenosis, are as amenable to this treatment as gastric ulcers. If in some cases, as is bound to happen, permanent cures are not effected, then resort may be had to surgery. Let it be remembered that the sooner a case of peptic ulcer is treated the better the prospect of a permanent cure.

Necrology.

ALFRED KING, M. D.

Portland, 1861-1916.



When a physician and a citizen so widely known as Alfred King, of Portland, dies, it becomes a task of serious importance to write fairly, concerning his career. In spite of the difficulties in the way, let me now make some attempt at a miniature portrait of a man of whom we may truly say that he was the most resourceful surgeon in Maine. Some could operate as well, others might be as sure in their diagnosis, but for daring capacity, face to face with surgical emergencies, he stood foremost in our era.

When a physician is known by his title of "Doctor," it emphasizes public opinion of him as a man of judgment and skill. When another is hailed by a nickname, he stands forth as able and hail fellow well met. But when titles and nicknames are thrown aside, and a physician is called by his simple name, as people did when they spoke of Alfred King, we see in that expression the stamp of approval as a genius placed upon him.

Alfred King, the son of Marquis Fayette and Frances Plaisted King, came into the world at Portland, July 2, 1861, and he departed from his labors in the city of his birth, June 4, 1916, from septic

pneumonia, originating in a diabetic condition from an ulcerated tooth. On the Tuesday previous to his death he suffered from toothache, on the next day his face and neck were swollen, on Friday he operated for the last time, and on Sunday he had passed into medical history.

After graduating from the public school, he entered Colby University, where he obtained his academic degree in 1883. During his college life he was fond of history, wrote good letters, and unfolded a great gift for friendships, with one man especially, with whom his life was, as we shall see, closely connected in political Maine. He then studied medicine at the Medical School of Maine, won his degree in 1886, and acted for a year as interne in the Maine General Hospital. Here he studied hard and proved his medical worth in many ways. Establishing himself in Portland he soon found work to do—served as city physician, and remained a busy man to the end. Surgery was at that date unfolding itself in innumerable ingenious operations. Abdominal and cranial surgery were all the rage, and King made himself a master of all advancements as they proved their worth. He soon received an appointment as adjunct surgeon on the staff of the Maine General, was duly promoted to full surgeon, and retained that position until his resignation in 1907. He acted also as demonstrator at the Medical School of Maine, and was gradually advanced to instructor and professor of surgery, a post which he held for the last six years of his life. I never had the pleasure of hearing him speak, but have been told that his methods of instruction were well illustrated, suggestive and valuable.

Taking a vacation in 1896, he went to Europe (one, by the way, of several similar voyages), and wrote to his comrades at home a series of delightful medical letters. From them it would seem that he had done nothing except to visit the great surgeons of that era. He spent wonderful days with Sir Victor Horsley, saw him operate on brain tumors, followed him in his rounds at the hospitals, witnessed his experiments on the effect of bullets on bones, and attended a meeting of the Royal Society, at which Sir Victor was presented with a gold medal for services to humanity. In this letter he comments on how little America has done for her great men. He also spent an evening with the younger Keith; "and I let him talk all he wanted to on uterine fibroids, and current methods of treating them." Crossing to Paris, he saw Pean, whom he styled a humbug in spite of his income of \$250,000 a year, and then attended a hernia operation by Championniere, which pleased him greatly. He examined the museums of Dupuytren and Orfila, noted the lovely preparations of the lymphatics, and observed of Pozzi that almost all of his women

patients had abdominal fistulæ after operations. He wondered why. He observed a surgeon in difficulties with fibroids, and suggested what might be done. Apostoli was a famous man in those days, with his electricity for fibroids, and this is what King saw: "I went to his clinique through a dark archway, up two flights of stone steps, through a smoky kitchen, and into an anteroom crowded with women. In the operating room beyond I saw the whole batch of them, from ruptured perineum to intestinal fermentation, treated electrically." He also saw a pin extracted from the bladder of a woman, gazed with joy at Fournier's specimens of syphilis, and admired big-hearted and big-fisted Tarnier, famous obstetrician, whose success he attributed to his enormous prehensile grasp with pliant fingers. Coming into Italy he was amazed at the modernity of the hospitals, saw in Florence an operation for extrauterine pregnancy, and attended the birth of five infants at one delivery. In Vienna he admired the skin clinics of Kaposi, smiled at the wig of the great aurist Politzer (who only asked Americans \$50 for looking into their ears), studied microscopic examination of the blood, and attended many necropsies. He found Koch's Laboratory, in Berlin, inferior, and was amused at the famous Brieger, all too laconic: "I never met one so uncommunicative. 'Do you like the peppermint treatment?' 'It is good.' 'How do you like tuberculin?' 'It is good.''" He also attended another extrauterine operation very well done by Leopold. As with Koch, so with Virchow, his museum was a poor place, and Virchow himself, whom he saw, a bent and feeble old man. Finally he saw Schleich, inventor of infiltration surgery, a review of which was first written in America by the writer of this notice, and to which King most kindly referred from distant Berlin.

It is a pity that these charming letters cannot be printed as a contribution to the personal medical history of the era to which they belong. They also reflect, better even than in conversation, the love of their writer for the best in the art to which he devoted his life.

Feeling sure, in 1904, that he could do better surgery by himself, he founded a private hospital, soon enlarged it, and kept it filled with patients for the rest of his life. He operated upon more than three thousand patients under its roof, and gave diplomas to fifty-seven trained nurses. His first operation was for inguinal hernia; his last, for abdominal cancer. In his last year of complete work, 1915, he performed two hundred and ninety operations. He called his hospital a private hospital, believing that a saint or a general was unbusiness-like. "His private hospital," as a patient said, "attracted me. I felt that my case would not be gossiped about." "Sickness in his hospital," as another patient said, "never seemed a business. He tried

to prevent the nurses from becoming callous to pain. Every Christmas he collected the nurses into his home, next door to the hospital, gave them a present of money, read to them bits of poetry of which he himself was fond, and tried in this way to make a family group."

The medical papers from the pen of Dr. King were numerous and finished. Looking them over I find few corrections and the English is good. He takes you into his confidence at once. "If you ask for my results, I will say that I had this percentage in unselected cases." Another began: "I was thinking of a case of diabetes one January morning in the wakefulness of the night." That case was his own. He knew that he was one of the afflicted. His theory of the disease was, that it was due to a fungus in the blood. To it he gave much study, found many instances of its occurrence in patients to support his idea, and treated many successfully with autogenous vaccines. It has been said that his idea amounted to nothing at all. But this is not the way in which to criticize any idea. Had it proved true, what a benefit to humanity! Failing, it incited others to pursue the cause from a different point of view, until in time the true cause will be discovered.

Amongst other papers, mention may be made of one "On Anti-septic Methods; a Study of the Occurrence of Suppuration in One Hundred Consecutive Capital Operations;" "Analysis of the Blood; a Study of Diabetes;" "Surgery of the Stomach," and "Dislocations of the Scaphoid and Congenital Malformations of the Clavicle."

Although careless in his dress, he was thoroughly aseptic as an operator. He was credited as bold and fearless, yet occasionally he seemed slow. I had heard of rapid, careless dissection, yet his deliberation with a patient of mine was noticeable. "He made you feel as if he would operate conscientiously," wrote a patient to me. "I went to see him; he said that I needed an operation. I left it to him, for he knew. I had it done, for you trusted to him to do the right thing. He could cure you if anybody could; what more could I ask. He said little, yet you trusted to him to do the best."

He helped other physicians at consultations, by saying that the attendant had done all that could be done, and the physician, in turn, said to the patient's friends, that he had never seen Dr. King do a better operation.

Although given to abundant gift of words at times, Dr. King could be curt enough at others. To a patient writing sheets of symptoms, he replied, "Dear Madame, come. Alfred King."

A little episode in which I figured with Alfred King keeps cropping up into my memory. I had at the hospital a patient with a

monstrous growth involving the turbinates and nasopharyngeal region, but as it was a bloody-looking affair, I declined to operate, and called on Dr. King. I told the man that I would give him the ether. The operation, as we expected, turned out a very bad job; much packing was needed, and the loss of blood was so enormous that frequent saline injections were needed. When the patient reached the convalescent stage, he could not thank me enough for saving his life. "Why, if I had let Dr. King operate, where would I be now!" Try as hard as I could, the man could never be made to believe that it was Dr. King who had done this miracle for him.

No notice of Dr. King would be complete without mention of his curious intervention into the politics of the First District of Maine. Dealings of this sort, which would injure the practice of almost every other physician, only served to improve his public stability. When in college he made friends with Asher Crosby Hinds, of Benton, who later, as clerk to Mr. Reed and other Speakers of the National House of Representatives, achieved national fame in parliamentary law. When Hon. Amos Allen resigned his seat in Congress, Dr. King vigorously favored Mr. Hinds for the vacancy, because he was the best man for the place. Without a thought of personal gain, he entered the lists in favor of his friend, wrote a nominating letter and made a nominating speech, which were models of their kind and marked him as a genius in administrative work. Once enlisted in politics he played the good game, as he called it, with zest, and had the great satisfaction of seeing his old friend elected for several terms and of having a voice in nominating his successor. He was always a staunch Republican, but had no use for the Independent. Because politics is a business, those who follow it know what is best for the people, and the Independent vote rarely accomplishes much.

Like many other men of high standing in surgery, Dr. King was made the mark of a number of suits for alleged malpractice. This was to be expected, moreover, because he was insured, and insuring corporations are often sued through physicians who have done no wrong at all. The causes alleged for some of these suits were neglect in using X-rays and producing a burn, neglect in not using X-rays in a fracture, neglect in leaving a surgical dressing within the abdominal cavity, although for all that anybody knew it might have been left by another surgeon at a different operation. He endured these trials patiently and as witness for the defence made an excellent impression. Historically, it is to be regretted that juries rarely deal fairly with the hard-earned reputation of any physician: "Able as he is, he may have made a mistake," is a common opinion.

Much has already been said of Dr. King as an agriculturist, but this little story shows how useful a man he was in the country. A farmer had a fine field laid down to grass, but it came to nothing. "I didn't know what to do," said the farmer. "I asked Dr. King, and he took the trouble to go to the field, to take specimens of the earth here and there and to test them with acids of various sorts. Finally he said: 'Bill, this land is too sour. It will not grow grass or anything. Get such a fertilizer, plow it in, seed it down, and you will get a good crop.' I did so, and got a crop that was immense. It is now the best field I own. That was what Farmer King did for me, and it was a great deal, I can tell you."

To those who never knew him living, or who may want to recall his personality, as portrayed by his contemporaries, let it here be said that the picture at the head of this notice is a good portrait of him taken shortly before he died. Round of face, with curly beard, thick, darkish-brown hair, small, deep-set eyes, with a gleam of geniality within them, he went about in the world, a big, burly, thick-set man, tall and big, but not too big for moving about briskly. His voice was melodious to the ear, and when called upon he was a good conversationalist and public speaker. He was, however, careless of his outer appearance, and his clothes, though well made and of good material, never had the appearance of fitting him. You would say, on looking at him in his office, that he had just thrown on his clothes and made the most of them as he jumped out of bed in the morning, and that just so they would remain unchanged all day long.

Alfred King was married October 26, 1887, to Miss Nellie Grace True, of Waterville, and she survives him.

Looking just once more at the career of this widely-known surgeon we feel justified in taking very brief notice of the often-repeated criticism that he did not set sufficient value upon his undeniably efficient services. But the clientage of Alfred King did not lie amongst the wealthy; his fees seem to have been well proportioned to the income of his patients and he was not born to be ambitious for money. In spite of these faults, if so they may be called, he never was indifferent to business obligations, or to the interests of his family, and he took care to ensure at the end that his affairs were on a sound financial basis.

J. A. S.

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Editorial Comment.

It is with a feeling of pride and gratification that we point to our advertising pages, as they represent those concerns who are conscientiously trying to do business on a truly ethical basis. Their advertisements carry no false claims, but merely state what they can and will do, while we may rest assured that they will stand back of every claim. If not, the JOURNAL wants to know it. Inasmuch as we want the members of the Maine Medical Association to patronize our advertisers, we want also to protect our members from any injustice.

In the February issue we introduce Fairchild Brothers & Foster and the Victor Electric Corporation. The former is thoroughly familiar to us all, but the latter has undergone radical changes. This corporation includes Snook-Roentgen, Scheidel-Western, and McCallister and Wiggin.

Look through our ads. of private hospital and sanitariums, and remember Bowdoin Medical School as a factor in Medical Education. Quaker Oats Co., Pompeian Oil, Borden's Condensed Milk, Standard Oil Company, Mead, Johnson & Company, Cook, Everett & Pennell, Horlick's Malted Milk Company, Katherine Storm, E. R. Squibb & Sons, N. Y., The Smith-Somes Company, and C. A. L. Langton offer a wide choice of specialties by strong and efficient organization.

Frank Betz Company submits some very attractive propositions by the way of office equipment, and we have on hand their catalogue of hospital equipment, which is well worthy of consideration.

Write these concerns for their literature and mention the JOURNAL of the Maine Medical Association.

Why Not Pyxacal?

The latest burden imposed upon the modern surgeon's brains and memory is another antiseptic lotion labeled with the name of Mac-Donald. Now this solution, guaranteed to be much superior to anything yet brought before the surgical world, is compounded of pyxol, 2 parts, acetone, 20 parts, and alcohol, 40 parts. Why not keep it easily in mind by utilizing the first syllable of the three component parts, namely, Pyx-Ac-Al, and accent it on the first syllable? There you have it ever ready to use. Verily, it is time that somebody tried to put a stop to name labels on medicine, operations, tests and methods in the laboratory.

MEDICO-LEGAL.

AN ACT TO CREATE A STATE DEPARTMENT OF HEALTH.

In explanation of the provisions of the Health Act advocated by the Legislative Committee of the Maine Medical Association, it is desirable to site the conditions which it is designed to remedy. It is no criticism of the present Board of Health that, hampered as it is by lack of funds and workers, it does not begin to accomplish the work which it plans. The total appropriation in this state is less than two cents per capita. There is but one physician whose whole time is devoted to the work. It is probable that, under circumstances where this physician is epidemiologist, health educator, sanitarian, statistician, and executive, a few important functions may become a trifle slurred. It is no news that in many parts of the state reporting of communicable diseases is neglected, and that the regulations of the State Board of Health are modified by the local boards to suit what they believe to be the needs of their locality. It is often difficult for a local Board of Health, made up, as it is, of men whose living is dependent on an outside business, and who take care of the public health in their spare time, to be absolutely strict with their neighbors who are the patrons of their private business.

To remedy this unfortunate situation, we have offered a bill containing briefly the following changes:

A per capita appropriation of twenty-five cents; the employment of a full-time commissioner, appointed by and responsible to the Governor and Council but removable for cause only, having under him five district health commissioners, responsible to and paid by him, under whose direction the local Boards of Health now existing are to do their work. All these officials under this bill would be trained public health experts. The local Boards of Health are responsible to

the commissioner and can be removed by him for neglect of duty. The commissioner is to employ experts of various training as he sees the need.

This bill is based on what was approved by the Council of public health and education of the American Medical Association, together with the U. S. Public Health Service, and would, we believe, provide both men and money to give us the beginning of an adequate health service in Maine. It would give also an executive with the necessary time and training to plan a scientific, sanitary survey of the state and such educational movements as seem profitable.

S. J. BEACH.

HEALTH INSURANCE COMMISSION.

AN ACT to establish a commission to investigate sickness and accident not compensated by Workmen's Compensation, of employed persons and their families.

Be it enacted by the People of the State of Maine, as follows:

SECTION 1. Creation and Duty. A commission is hereby created to be known as the Health Insurance Commission, which shall investigate:

1. Sickness and accident of employees and their families not compensated by workmen's compensation in the State of Maine, the loss caused to individuals and to the public thereby, and the causes thereof;

2. The adequacy of the present method of treatment and care of such sickness and injury;

3. The adequacy of the present methods of meeting the losses caused by such sickness or injury either by mutual or stock insurance companies or associations, by fraternal or other mutual benefit associations, by employers and employees jointly, by employers alone, or otherwise;

4. The influence of working conditions on the health of employed persons; and

5. Methods for the prevention of such sickness; all with a view to recommending ways and means for the better protection of employees from sickness and accident and their effects, and the improvement of the health of employed persons and their families in the state. The commission shall submit a full final report including such recommendations for legislation by bill or otherwise as in its judgment may seem proper, to the legislature of nineteen hundred and nineteen.

SECT. 2. Members. The commission shall consist of five members, one of whom shall be an employer, one an employee, one a physician, to be appointed by the governor.

SECT. 3. Powers. The commission shall have power to elect a chairman and other officers, to examine witnesses, books and papers respecting all matters to be investigated, to issue subpoena or compel the attendance of witnesses, the production of all books and papers, to administer oaths, to employ a secretary, to purchase books and necessary supplies.

SECT. 4. Co-operation of Other Departments. The Commissioner of Labor and Industry and the Industrial Accident Commission are hereby directed to co-operate with the commission and to render it any such proper aid and assistance as, in their judgment, may not interfere with the proper conduct of their respective departments, and, as far as possible, rooms in buildings owned or leased by the state shall be assigned to the commission for the hearings or other purposes.

SECT. 5. Expenses. The members of the commission shall receive no compensation for their services, but shall be paid for necessary clerk hire and incidental expenses, such sum as shall be allowed by the governor and council, to be paid from any money in the state treasury not otherwise appropriated.

COMPENSATION ACT; AMENDMENT THERETO.

AN ACT to amend Chapter 295 of the Public Laws of 1915, relative to the Compensation to Employees for Personal Injuries Received in the Course of Their Employment and to the Prevention of Such Injuries, by Allowing the Injured Party to Select His Own Physician and the Hospital to Which He Shall be Carried.

Be it Enacted by the People of the State of Maine, as follows :

SECTION 1. Section 10 of Chapter 295 of the Public Laws of 1915 relative to compensation of employees for personal injuries is hereby amended by inserting between the words "needed" and "but" in the third line of said section the following, "the injured party shall have the right to select his physician and hospital to which he shall go," so that said section as amended shall read as follows:

"SECTION 10. During the first two weeks after the injury the employer shall furnish reasonable medical and hospital services, and medicines when they are needed, and the injured party shall have the right to select his physician and hospital to which he shall go, but the amount of the charge for such services and medicines shall not exceed the sum of Thirty Dollars, unless in case of major surgical operations being required, and the employer and employee being unable to agree upon the same, the amount to be allowed for such medical services or medicines shall be fixed by the Commission upon petition by either party setting forth the facts."

This amendment takes its origin from the fact that in the large

manufacturing centers in the state every effort is being made to secure physicians by contract to care for the cases coming under the compensation law. This matter has been discussed thoroughly in Androscoggin County, and the preceding amendment is proposed by that county society and it seeks the endorsement of the medical profession of Maine. It is certainly worthy of consideration and the support which we think it should have.

County News and Notes.

CUMBERLAND.

PORTLAND MEDICAL CLUB.

The regular monthly meeting of the Portland Medical Club was held at the Columbia Hotel, February 1, 1917, with Dr. Philip Thompson presiding.

Drs. Burrage, Pingree and Vanamee reported a case of fracture of cervical vertebræ, which was of especial interest as showing that such a condition may exist without giving rise to severe symptoms, in this instance merely pain in head and neck with limitation of movements. With these there was also associated malaise. An X-ray plate of the fracture was shown by Dr. Vanamee. The case was complicated by the presence of a specific infection.

Dr. R. F. Chase, spoke on duodenal feeding in gastric ulcer and showed the duodenal tube. He considered that, except in conditions with pyloric stenosis, this method of treatment is to be preferred to operation, because it is shorter and without risk.

Dr. E. W. Gehring reported a case with intermittent fever which eluded diagnosis during many months. Finally a slight glandular enlargement was noted and a microscopical examination of a section of excised gland showed the pathological picture of Hodgkin's disease.

Dr. Rogers spoke of a case of pernicious vomiting of pregnancy. After delivery there ensued a paralysis of both legs, which eventually terminated in recovery. He thought this might perhaps be similar to Dr. Warren's case of transverse myelitis reported at the last meeting.

A short paper was read by Dr. F. J. Welch on the tuberculosis situation in Portland. A hospital of forty beds for the care of advanced cases is urgently needed, as the present arrangements for tuberculous patients at the City Home are deplorably inadequate. An appropriation of about \$31,000 is required.

The following resolutions were suggested and adopted by vote of the Club:

"That tuberculosis is a great menace to the public health of the City of Portland and that the careless consumptive is a dangerous person in the community."

"That we believe that the public is sufficiently aroused to the immediate need of action to meet this situation.

"That there should be established in the City of Portland a separate hospital for far advanced cases of tuberculosis, under the management of the municipal Board of Health.

"That the resolutions be spread upon the records and a copy thereof be presented to the Mayor and City Government."

A committee, consisting of Drs. Welch, Smith, Gehring, Milliken and Swift, was appointed to present the matter of a tuberculosis hospital before the City Government.

The paper of the evening, entitled "The Laboratory Fetish," was read by Dr. Elmer H. King. This dealt chiefly with certain misapprehensions held by many physicians in regard to the significance of laboratory reports. The reader emphasized the importance of accurate work if reports are to be of value. Examples were given of conditions in which the diagnosis should be made upon clinical findings without waiting for the laboratory returns. In suspected diphtheria, with typical throat, antitoxin should be administered at once before the report on the culture is returned, lest valuable time be lost. In tuberculosis also, the diagnosis should be made and treatment instituted before the appearance of the tuberculosis bacilli in the sputum. As to the Wasserman reaction, it should be remembered that the technique is most difficult and complicated, and as usually performed, errors are liable to occur. In suspected syphilis, the reliance should be placed mainly upon clinical symptoms and the positive or negative Wassermann be regarded merely as one point in diagnosis.

The paper proved most instructive, and stimulated free discussion.

H. M. SWIFT, *Secretary*.

SOMERSET.

SOMERSET COUNTY MEDICAL SOCIETY.

The annual meeting of the Somerset County Medical Society was held December 21, 1916, at Skowhegan. Officers for the year 1917 were elected as follows:

President, H. E. Marston, North Anson.

Vice-President, John L. Peper, Madison.

Secretary and Treasurer, H. W. Smith, Norridgewock.

Censor for three years, W. G. Sawyer, Madison.

A paper was read by W. E. Webber, of Lewiston. Subject, "Post Operative Treatment of Abdominal Cases."

Dr. Webber also read a paper on "Trephining for Apoplexy According to Remsden."

FRANKLIN.

FRANKLIN COUNTY MEDICAL SOCIETY.

The Franklin County Medical Society held its annual meeting at Farmington, Dec. 8, 1916.

Officers for 1917 were elected as follows:

President, Dr. F. B. Colby, Rangeley.

Vice-President, Dr. J. E. Cartland, Kingfield.

Secretary and Treasurer, Dr. G. L. Pratt, Farmington.

Delegate to the Maine Medical Association, Dr. O. B. Head, New Sharon.

Censor for three years, Dr. A. M. Ross, Rangeley.

Dr. J. J. Linscott, of Farmington, and Mrs. J. W. Perkins, of Wilton, were unanimously elected honorary members of the society.

The principal business of the meeting was a discussion of the fee table for Franklin County. It was the practically unanimous feeling that certain fees should be increased, and a committee was appointed to draw up a revision to go into effect January 1, 1917.



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Rice**

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A committee was also appointed to confer with a committee appointed by the Androscoggin County society to consider the question of hospital abuse.

GEORGE L. PRATT, *Secretary.*

SAGADAHOC.

SAGADAHOC COUNTY DAUGHTERS OF HYGIEIA.

The third quarterly meeting of the Sagadahoc County Daughters of Hygieia was held at the Colonial Cafe, Bath, on the evening of January 24th.

Banquet was served at 7.30.

Mrs. Ethel Kershner, President of the society, presided at the business meeting. Minutes of the October meeting were read and approved.

The by-laws were distributed and the same officers were re-elected for the ensuing year.

The observance of baby week was discussed, and Mrs. Anna K. Mullin read an interesting report. Mrs. Kershner, Mrs. Fuller and Mrs. Snipe were elected a committee to confer with other organiza-



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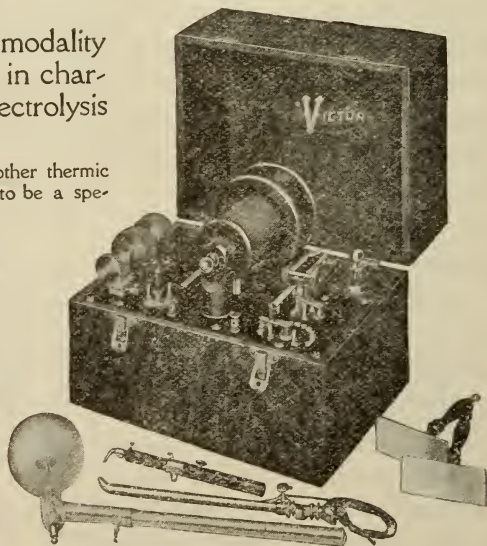
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tions in the city relative to observing baby week sometime in the spring, and they were also to serve as program committee for the next meeting.

Mrs. Nellie Hannigan was appointed entertainment committee.

Mrs. Frank Snell, of Isle au Haute, was the guest of the evening.

There were eleven members present. Adjourned at 10.30.

Those present were: Mrs. Josie Irish, Bowdoinham; Mrs. Emma P. Williams, Phippsburg; Mrs. Christine C. Snipe, Bath; Mrs. Nellie M. Hannigan, Bath; Mrs. Gladys Morin, Bath; Mrs. Frances H. Peaslee, Bath; Mrs. Annie Leathers, Wiscasset; Mrs. Ethel Kershner, Bath; Mrs. Anna K. Mullin, Bath; Mrs. Dasie H. Fuller, Bath; Mrs. Mildred T. Barker, Bath.

FRANCES H. PEASLEE,
Secretary.

Personal News and Notes.

Dr. John W. Bowers, of Portland, is visiting in Florida.

Dr. H. B. Webster, of Castine, recently spent a week in Boston.

Dr. and Mrs. W. D. Williamson are south for the winter months.

Dr. W. H. Hawkins, of Lewiston, recently spent several days in Boston.

Dr. Harris J. Milliken, of Bangor, has assumed the office of jail physician, succeeding Dr. Harry D. McNeil.

Dr. and Mrs. Horace L. Gould, of Bucksport, are receiving congratulations on the arrival of a son, Saturday, February 3.

Dr. and Mrs. H. E. Snow announce the engagement of their daughter,



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Pettijohn's Breakfast Food—soft rolled wheat—is to all folks a luxury dish.

Pettijohn's Flour is far better than Graham, as it can be used in as many ways.

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Chicago

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Margaret Louise, to Parke Spofford Kennedy, of Bucksport.

Dr. H. M. Heald, a native of Buckfield, and for twenty years engaged in the practice of medicine there, has gone to Skowhegan and engaged offices in the J. Palmer Merrill block.

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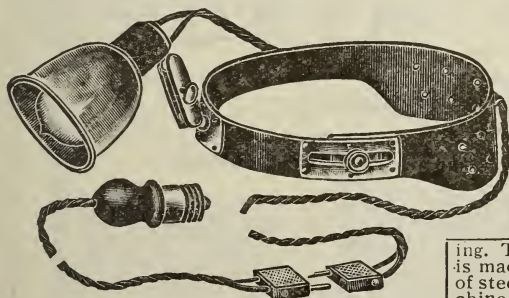
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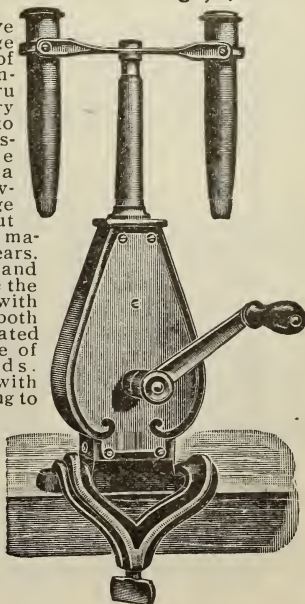
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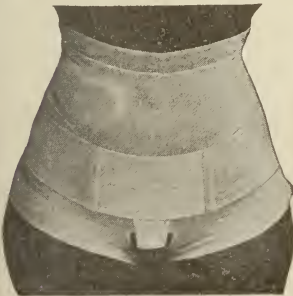
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TABLE OF CONTENTS

Original Articles—

Fracture Treatment From the Stand- point of the Orthopedic Surgeon..	247
The Treatment of Alcoholism and Drug Addiction.....	256
Necrology	261
Propaganda for Reform.....	263

Editorial Comment—

Medical Legislation.....	266
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Miscellaneous—

Notices	268
County News and Notes.....	269
Medico-Legal	269
Personal News and Notes.....	VIII

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No. 8

*FRACTURE TREATMENT FROM THE STANDPOINT OF THE ORTHOPEDIC SURGEON.

BY DR. W. RUSSELL MACAUSLAND.

Surgeon-in-Chief of Orthopedic Surgery at the Carney Hospital.

Mr. Chairman and Gentlemen:

The subject of "Fracture Treatment" is always of great interest to the general practitioner. The advances which have been made in the open methods of certain fractures have brought surgeons to this period in which it may truthfully be said that "The art is long and the judgment difficult." The best function in the shortest period of time is the only measure of the proper application of any principle.

All of us are cognizant of the fact that the larger portion of fractures are better treated by conservative means when the mandates of certain principles are properly carried out, yet we see among these cases many poor functional results attributable to either lack of knowledge of these principles or to lack of care in carrying the treatment out. Function permanently impaired by persisting deformity cannot be influenced by after treatment, no matter how conscientiously persisted in; baking and massage cannot take the place of proper primary treatment, and the selection of proper treatment and the perfect completion of such treatment is becoming more and more important.

From an industrial standpoint insurance companies already are placing these injuries more and more in the hands of surgeons interested in this special subject and are getting thereby more consistent results than when their fractures were treated by whoever happened along. One hospital in a large city is now doing all this class of work for certain companies with a special staff, and in Boston a new, well-

*Read before the Cumberland County Medical Society.

equipped hospital is partly given over to the care of these cases. The insurance companies are recognizing from an economic standpoint that judgment in fracture cases must be in competent hands. We, however, are more interested in the subject from the standpoint of the patient, to obtain the best functional results in the shortest period of time.

What is the method to be selected in the individual case? What is the object and reason for selecting this form of treatment? What cases require open incision? What advantage is to be expected with operative interference? What are the dangers connected with operative interference? Should we use bone splinting or plates in these operative cases and what form of retentive apparatus is preferable for immobilization? What is the after treatment? What special fractures require special treatment? These are all questions that we are continually confronted with, all of which have to be answered independently in any given case.

A fracture is a solution of continuity either with or without displacement. Deformity, that is, displacement represents by far the main cause of disability, just as deformity is the important fundamental in other orthopedic conditions, as flat feet, club feet, etc. Deformity, then, representing a distortion from normal should always be corrected.

Immediately you may ask, "Is perfect reduction necessary?" In answer I will say that the more perfect the alignment the more perfect and rapid the return to normal and the better the functional end-result. This is more true, if possible, in fractures near and involving joints, more important as a principle in dealing with the lower than the upper extremity. Furthermore, imperfect alignment means excessive callus, which in itself increases danger of loss of joint motion, for even a shaft fracture may have muscle and fascia adherent to a degree that limits motion, to say nothing of nerve pressure and the dangers from such excessive callus.

Surgically, it is most gratifying to obtain perfect alignment, to find almost no callus externally, and to demonstrate a perfect joint following a near joint fracture. It is for this we should strive. Unfortunately routine treatment of fractures in many of our hospitals is carelessly handled. The surgeon is either too busy or else not interested, leaving them to the uncertain care of an interne. This is wrong. The work should be done by a man desiring to study and spend time in this branch of surgery.

Take, for example, fractures of the hip. Could any more consistently deplorable results be found? It seems to me about time to give up Buck's traction, which does not reduce deformity, sand bags,

which do not immobilize, and all other makeshifts which have proven their inefficiency for so long a time.

For the purpose of discussion I shall divide fractures into three groups:

- 1st. Fracture of the long bone.
- 2nd. Fracture in and about joints.
- 3rd. Fracture of the spine.

1st. Fracture of the humerus and shaft of the femur do fairly well under conservative treatment when there is little displacement. Where there is much displacement and when approximation is poor I do not hesitate to etherize and apply severe extension by means of heavy apparatus, such as the Hawley frame, and apply plaster to hold. If this method is not satisfactory, for any reason, then I do not hesitate to operate. Many of these fractures (as will be shown by lantern slides) can be easily placed in absolute anatomical reduction by a simple open incision, the serrations fitting perfectly. In the spiral ones, where approximation is poor, after replacement they may be wound with catgut to hold until some retentive dressings are applied. This form of treatment is especially desirable in certain fractures of the carpal and tarsal shafts, in which perfect alignment can be obtained by open incision and reduction with the help of a blunt dissector.

Non-union of such fractures is usually due to poor approximation or the interference of some fascia or muscle tissue. We have all seen cases of delayed union which later on united. If, however, after a period of four to six months, union has not taken place in spite of retention in good position, then I believe that operative interference is indicated. Bone plates I find of little use in such conditions. A bone plate, it has been very well demonstrated, delays union. In these cases of non-union the best procedure, in my opinion, is an actual bone graft, either taken from the tibia of the patient or from the upper part of the fracture in question. The result from this method is most gratifying.

2nd. In considering fractures in and near joints I shall try and take a few of the specific instances and apply certain principles.

(a) Fractures of the upper humerus. Fractures of the head of the humerus may be very simple or comminuted. When comminuted, or where there is considerable malposition, open reduction may be undertaken with little danger, and the fracture immobilized in abduction by means of plaster spica from the fingers to the chest. When there is any dislocation of the head, operative interference is always indicated. Deformity near the shoulder joint will limit antero-posterior motion some, and abduction and external rotation a great deal. Therefore the replacement of these fragments and the placing of the arm in

abduction not only insures return of these motions but also lessens the danger of that frequent complication of shoulder fracture, sub-deltoid vursitis or periarthritis, which gives long and painful disability.

(*b*) Fractures of the lower humerus. Fractures of the lower humerus, especially in childhood, give fairly satisfactory results providing flexion is used. The displacement when the fracture is complete is usually through the line of the epiphysis or just below through the condyles. This fracture is treated in the hands of some surgeons by reduction and retention in a right angle splint. This is to be severely condemned. There is one anatomical position which may be depended upon to hold reduction, acute flexion. Do not expect acute flexion to reduce the deformity. It will help, but strong traction and a direct forward pull should certainly be used and then acute flexion will hold the reduction. Swelling of the hands occurs in unreduced cases, very rarely because the flexion is too acute.

In unusual cases, with rotation of fragments or other "irreducible" deformity, it has been most gratifying to see results from a small external incision, and after a proper understanding of the type of fracture the absolute anatomical reduction of the same by means of the gloved finger and blunt dissector; the fragments can be replaced so that the fracture line looks like a piece of cracked china. There is no danger in this method of injuring vessels or nerves. Here probably, more than any other joint in the body, is a joint which will not take care of excessive callus and therefore demands complete reduction of deformity.

Another common type of fracture is that of the head of the radius. If a simple fissure and in perfect position, the usual treatment is all that is necessary. You see quite a number of working men with fracture of the radius with slight displacement, which, like fracture of the carpal and tarsal scaphoid and semilunar, give great pain through a long period of time although fairly good motion may be present. These fractures in working men do better with excision of the head of the radius. Fractures of the lower end of the radius, or Colles' fractures, have done well under conservative methods and very seldom require opening. By ether and early manipulation these fragments can be placed forward and held in position. If the fragments can be held in position and at the same time the hand hyper-extended in the splint in the position of strength, a great many of the stiff fingers and stiff wrists will be avoided. This position is the "strong" position for the wrist in all lesions about the joint. Fractures of the scaphoid and semilunar are often overlooked. They frequently cause very little immediate disability. In diagnosis, weakness of the hand following an injury may be the only clue. Sometimes the X-ray

does not show if not taken in a certain plane. Excision of part or all should always be considered.

A consideration of fractures in the hip joint might well occupy a full hour for discussion. Probably no fracture has been so long poorly understood and badly treated. Largely mistakes have been due to traditional teaching and writing and the ordinary treatment in



LEARY. Fracture both bones leg
before operation. Note
serrations.



Following open reduction,
anatomical reposition.



Fractured femur in child before
operation. Note serrations.



After operation.

surgical clinics. Fracture of the neck of the femur always means deformity. This deformity may be slight or may be great, but whether slight or great requires reduction. In the traditional treatment reduction has not been the object in view, and even retention of the fracture or immobilization has been ill accomplished by the ordinary means. Compare, for a moment, the patient, his comfort, his ability to move, and his general happiness with the ordinary treatment and



CHEEVER. Fractured 4th metacarpal. Fracture-dislocation of base of proximal phalanx, middle finger.

Following open reduction and replacement of fragments with blunt dissector. Note absence of callus.

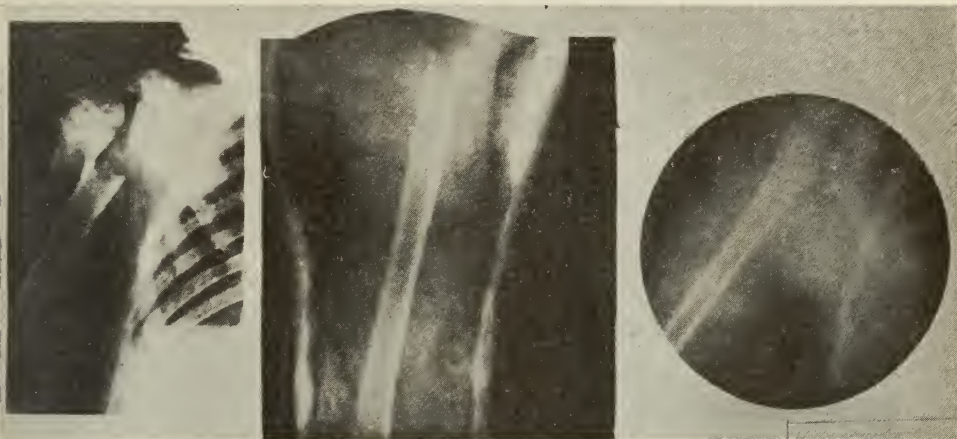


Fracture lower epiphysis of humerus with displacement backwards.

After operation. Anatomical replacement. Note callus formation up outer side of humerus due to tearing of periosteum and hemorrhage.

with the reduction after the Whitman method and the application of a long plaster spica.

Under the older methods of treatment the Buck's traction apparatus or some form of splint has been in use for immobilization. In most cases they did not immobilize. Hence it is easy to understand that patients so treated suffer pain in the movement and live in constant dread of any necessity for lifting them about, as is demanded in



MOSES. Fracture upper end of humerus before manipulation.

Position after attempt had been made to place fragments in proper position by manipulation alone.

Anatomical position following open reduction with aid of blunt dissector.



Fracture lower epiphysis before operation.



MCMURRAY. After replacement by means of blunt dissector through incision.

ordinary nursing and care. Is it any wonder that the older patients with these fractures rapidly become discouraged, and, losing strength and resistance, die? Compare the patient so treated with a patient in a plaster spica, with the fragments completely reduced and fixed in strong abduction. Pain as a factor is eliminated, for in the first place there is no deformity, and in the second place fixation is good. We have therefore obeyed two of the fundamental laws in treating fractures.

Let me run over, for a moment, the various steps in the abduction method of treating these fractures of the hip.

First, traction reduces the overriding, the trochanter is carried well forward, reducing the backward displacement, and then by inward



Separation of femoral epiphysis, no history of injury, before open reduction.



LAMENT. Anatomical replacement after open reduction.

rotation and strong abduction the fragments are held in close apposition. Non-union by such a method is comparatively rare. Deformity or malposition is even more rare, and the slow, painful hypertrophic changes which take place about the hip joint when badly treated are not seen. The patient in the spica may sit up on the edge of the bed a few hours after its application, may stand and walk with crutches as soon as able to and may walk upon the injured leg after three or four weeks, and, best of all, may look forward to a result which does not leave him a permanent cripple.

3rd. Fractures of the spine I shall allude to merely to point out a few interesting features. In the first place these fractures are very

frequently overlooked. Even in children their frequency is surprising. In the past year three cases have come to my attention of fractures of the spine which were undiagnosed until looked for.

Transverse processes are frequently broken by direct or muscular violence and cannot be recognized from the history alone. X-ray is a determining diagnostic point. All such fractures should be treated either by hyper-extension on a frame or in a well fitted plaster jacket.

Just a few words, in closing, in regard to operative interference in the treatment of fractures. The time of choice, in my opinion, is not immediately after the injury but after a week or ten days. Strict surgical asepsis and an unusual amount of mechanical skill are very important factors. The ordinary asepsis and even the ordinary hemostasis is not sufficient in this field of surgery. All skin edges should be kept covered; no knife or instrument that has touched the skin should be used in the deeper tissues. Blunt dissection is a valued means of approach to most fractures and I do not hesitate to use my gloved fingers in separating muscles, since I feel that manipulation is gentler and more accurate than when instruments are used.

Lane's plates and the use of various non-absorbable material to hold reduction is, in my opinion, to be studiously avoided. The indiscriminate use of plates has brought their use into disrepute. There is no doubt but what in an occasional place the Lane's plate has a distinct field, but with a little ingenuity in the placing of the fragments and in the use of absorbable material and carefully made supports, non-absorbable materials will not be found necessary.

This paper has rather hastily and incompletely covered a very large field, and if the few principles which I have tried to represent to you will help in standardizing the judgment which we all find so difficult I shall feel that I have accomplished my purpose. Some of the points brought forward I can illustrate by some lantern slides which are to follow.

THE TREATMENT OF ALCOHOLISM AND DRUG ADDICTION.

BY CARL SCHEFFEL, PH. B., M. D., *Brookline, Mass.*

In considering the treatment of this ever increasing class of unfortunates, we meet with the most diversified methods of handling these patients that it is impossible to conceive. The methods in vogue for withdrawing the offending drug range all the way from a gradual diminution in dosage to abrupt and complete sudden withdrawal. There exists no doubt whatsoever but what the sudden complete withdrawal of alcohol from the habitual user of large doses of spirits may result in disastrous consequences. Of other drugs, cocaine is the only one that may be withdrawn suddenly with any degree of safety. Much difference of opinion seems to exist concerning the withdrawal of morphine and heroin. In utilizing the Towns-Lambert treatment, the drug is reduced with comparative rapidity. Dr. Lambert claims that he has never encountered the much heralded stage of collapse following such rapid withdrawal. Indeed, those unfortunates who are deprived of their drug and locked up in a padded cell do not seem to actually collapse, although sooner or later a state of exhaustion supervenes, which may be brought about by the physical struggles of the patient rather than from the withdrawal of the drug itself.

Whatever method of treatment is adopted there are three cardinal principles involved, namely: unpoisoning the patient physically, building and toning him up physically, and strengthening him mentally so that he may withstand temptation after the physical craving has been removed, thus making him again a useful member of society from a sociological and economic standpoint. The employment of any one of these principles alone will not bring about a cure, but a combination of the three, intelligently applied to meet the needs of each individual patient, will result in success even in severe cases of long standing. Considering the various therapeutic measures and their reason for application, based purely on physiological and psychological principles (not on hearsay or prejudice against any particular method of treatment) will give a good general idea of the end-result to be expected in any given case.

Our primary object being to physically unpoison the patient, the first therapeutic necessity is free elimination. At the present time, catharsis in one form or another seems to be the popular method of elimination. When we take into consideration the fact that these patients invariably suffer from some degree of autointoxication, to-

gether with our knowledge that opium and its derivative salts may be recovered in the intestinal tract up to 30 or 40% of the total intake, we at once appreciate this is the paramount channel of elimination in these cases. In alcoholics, outside of relieving autointoxication, and because of its hygroscopic effect, thus diminishing the toxicity of the blood, active purging is not indicated, as alcohol has never been recovered from the feces. Elimination of alcohol is carried on in the lungs to the amount of .5 to 6 per cent., therefore, all therapeutic measures tending to increase respiratory exchange should be utilized. In the drug line the belladonna group will accomplish this purpose. The high-frequency current properly applied will act as a useful adjuvant. As both alcohol and opium with its derivative salts are to some extent eliminated through the kidneys, the former to the amount of 1 or 2 per cent. and the latter in undetermined quantities, all diuretics are useful. Copious draughts of plain water, excluding certain cardiac cases, are perhaps as efficient as any other diuretics in flushing out the kidneys.

In addition to elimination by the bowel and kidneys, we must not neglect the importance of cutaneous elimination. Although it has not as yet been determined definitely what percentage of alcohol or other narcotics is capable of being eliminated through the skin, there is no doubt but what the amount is appreciable. Consequently the skin should at all times be kept active. This should be done not only with elimination in view, but also because most therapeutic measures that produce diaphoresis also have a sedative effect, a subject which will be taken up later. Our medicinal diaphoretics are not well adapted to this class of patients. The hot pack, electric-light bath, or the Turkish bath are all active diaphoretics and sedatives. Not only do these measures act in this manner, but they play a triple role in greatly stimulating general metabolism, which is highly desirable until the patient is entirely unpoisoned.

Having considered elimination our attention is next directed towards the stimulation and toning up of the system physically and mentally. For threatened or actual collapse the rapidly diffusible stimulants are undoubtedly the most reliable. As a general cardiac tonic digitalis seems to be favored by the majority of the medical profession, and for our purpose it serves the double role of heart tonic and diuretic when renal deficiency exists. The status of strychnine, as a direct cardiac stimulant, being at present a disputed question does not prevent its being used as a general nerve tonic and an excellent stomachic in combination with gentian root. Of great value in suitable cases are also the Scotch douche, cold friction rub, and needle bath,

all therapeutic measures of great worth but sadly neglected by some in the treatment of these cases. In patients showing signs of great depression the high-frequency current systematically applied produces excellent results.

No system of human repair reaches its highest degree of efficiency without taking into consideration the influence of the mind on the body. To neglect or overlook psychotherapeutic measures at this stage of the treatment is only acknowledgment of ignorance concerning this form of therapy. No modern physician can deny that proper psychic influence acts as a powerful aid to all other therapeutic measures in building up a physically weakened body. Certainly each and every one of these alcohol or drug takers need mental inspiration and adjustment that will bring their unbalanced mental state back into stable equilibrium. It is admitted that this cannot be accomplished in a short period of time in a certain number of cases; nevertheless that does not justify neglect or discredit of these therapeutic measures. Without employing systematic psychotherapy we are not doing our full duty towards the patient, and the sooner in the course of treatment it is applied the better.

Nothing has as yet been said of the restlessness, irritability, and insomnia encountered in the majority of these patients. In alcoholism the physiological measures advocated for cutaneous elimination and their triple role of eliminant, sedative, and soporific have already been considered. When these measures do not suffice, drug medication must be supplemented in the form of bromids, paraldehyde, or chloral, the latter being the most reliable in non-cardiac cases. In drug addicts physiological measures persistently employed will certainly cause sedation. In obstinate insomnia there is nothing of greater value than a prolonged warm bath or a cold pack, the choice of either depending upon the reaction displayed to hot or cold by the individual. As a general rule debilitated patients respond better to heat while those complicated by certain cardiac lesions will derive greater benefit from cold followed by friction.

An addict to a narcotic drug repeatedly doped with hypnotics will very easily acquire a dependence on some form of drug for sedative purposes, and these patients are undoubtedly often discharged from treatment only to find that they have substituted one drug for another. There is some reason to believe that a certain amount of insomnia may be caused by the course of treatment itself. Just reason a little! What sense is there in awakening a patient from a sound natural sleep in order to give him some medication or treatment? Does any physician, however great, think for a moment that he can

improve any condition by interfering with a process of nature? All that any physician can do, or should attempt to do, in any given pathological condition is to assist nature; awakening a patient from a sound natural sleep certainly does not lend assistance to nature. Such an act is a merciless interference with biological laws. So, too, is it utter nonsense to prescribe powerful soporifics with the idea of giving the patient much needed sleep and at the same time continue hourly or semi-hourly medication simply in order to comply with some routine method of treatment; yet such procedures can be daily observed in many of our institutions for the care of the sick. Is it a wonder, then, that insomnia is so prevalent? Is the medical profession not just as guilty in causing certain percentages of insomnia as it is certainly guilty of causing a certain number of drug addicts because of the injudicious use of powers given them in the practice of their profession?

One more consideration in the active treatment of these cases, namely, the substitution of one drug for another. There is no question but what a drug possessing an inhibitory and sedative influence on the peripheral nerve-endings, and a general antispasmodic effect, is of much value in the treatment of both alcoholism and drug addiction. A drug of this type lessens irritability, eliminates the greater part of the griping from active catharsis, and to a slight extent modifies the withdrawal pains in drug cases. Such a drug, together with a thorough application of radiant light or heat, usually entirely stops these pains.

A patient discharged from an institution for the treatment of these cases may be free from the craving for drink or drugs. He has been put into as good condition as possible, depending upon the duration of his stay and his previous condition. Here the question arises, is he in a condition to withstand the trials and tribulations of daily life or will he break down under the burden and resort again to his favorite addiction which he knows will give him at least temporary exhilaration? Will the patient be able to mingle with his former associates and return to his former environments and withstand temptation? Around these very questions centers the ultimate value of any treatment for these unfortunates.

It may be stated, and justly so, that here we are dealing with a class of patients that require careful and systematic aftercare as no others need it. No matter how much we may endeavor to buoy up the patient's mind in an institution, no matter how strong our suggestions to him have been, if he is left alone and forgotten after his discharge he is apt to relapse under the first unfavorable circumstances that he will sooner or later encounter in everyday life. It is then that he most needs a firm but sympathetic mind to guide him over the rough

places. As the late Prof. Münsterberg, of Harvard, so truthfully states, "If at the right moment before he took the first step again, even the slightest counter-suggestion had been applied the disastrous second development could have been easily averted."

A strict system of probation would solve the problem of many cases of relapse. Keep in close touch with the patient after his discharge. Have him report at regular intervals for a definite period of time and employ every known psychotherapeutic measure towards strengthening his mental self and his powers of resistance against his former foe. Force on the unfortunate victim's mind that he is being guided by a friend as well as a physician, and with a combination of patience and tact the seemingly impossible can often be accomplished. Sending this class of patients to some secluded rest resort will certainly never fit their minds for the needs of their daily life, whether this be business, professional, or leisure.

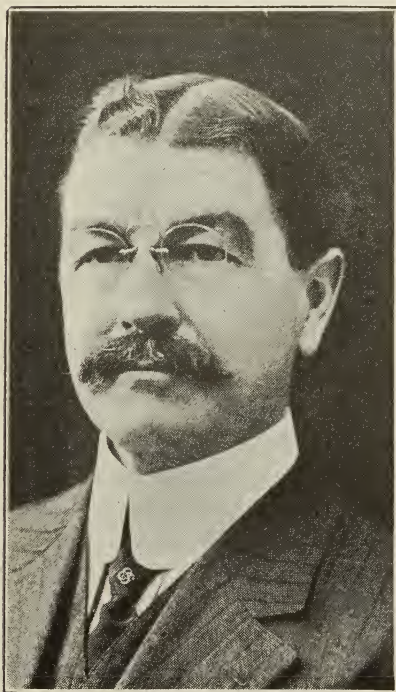
In conclusion, let us view this class of patients as worthy of our best efforts. It is not expected that the born idiot, the feeble-minded, nor the individual that has entirely lost his moral fibre, can be permanently freed from these addictions by voluntary methods. Such patients, as a rule, do not want to be cured. The entire coöperation of the individual is necessary to obtain the best results.

In this paper generalities only have been considered. Not any one method of treatment has been advocated, but all measures of known therapeutic value have been reviewed, their physiologic or psychologic actions briefly considered, and their object for adoption given. They should all be used simultaneously and systematically if we would obtain the best possible end-results in the shortest possible time.

Necrology.

JOHN EMILE WADSWORTH

1870-1917



Above is a good likeness of the late Dr. Wadsworth, and we are glad to take one more look at his speaking countenance, which will be missed from the meetings of our Association.

Dr. Wadsworth was born in Hiram, Me., April 7, 1870, and he died at Skowhegan after a nine days' attack of pneumonia, Monday, January 29, 1917, leaving a widow, Alice Locke Wadsworth, originally from Fryeburg, and two children. Dr. Wadsworth was the son of the late Samuel Dean and Sarah Annette Warren Wadsworth, connected with the well known family of General Wadsworth of Revolutionary fame, and with the celebrated English poet of the Lake School of literature. After studying in the Cornish schools, he was graduated

(Salutatorian) at Fryeburg Academy in 1890, attended two years in the academical department of Dartmouth College of the class of 1894, spent a short time in a business college, and then studied privately with the late Dr. Stephen Holmes Weeks, of Portland. Obtaining his medical degree at the Medical School of Maine in 1896, he served a year as interne at the Maine General Hospital, where he gave very satisfactory service to the staff. Immediately after obtaining his honorary diploma from this institution he settled in Skowhegan, soon obtained an excellent clientage and continually enlarged it by the highest sort of medical and surgical ability and services for the rest of his busy life. Having a liking for writing out his experiences, he composed a number of medical papers, one of which, "On Myxodema" on which he was much interested, was well thought of. Then, again, as an official of the Anti-Tuberculosis Association of Maine, he read in public an excellent paper on this constant scourge of the nation.

Soon after establishing himself in Skowhegan, he built a private Hospital for his surgical cases, and as patients increased in number as the result of his many successful operations, it was enlarged, and incorporated with the title of the Somerset Hospital, and under his guidance continued its former noteworthy successes in medicine and surgery. Amongst the many noteworthy operations performed within its walls by Dr. Wadsworth, the chief renown may attach itself to a remarkably successful one in a case of spina bifida, which had been declined as inoperable at another hospital outside the state, but which he took in hand as a life or death emergency case, operated upon deliberately and successfully, the patient being still alive after several years.

It is a curious fact and a revenge, as it were, of a disease, which Dr. Wadsworth had so often skillfully conquered, pneumonia, that it should have been the one which ended his active life, in the Somerset Hospital, which he had founded and to which he had so long devoted himself.

J. A. S.

PROPAGANDA FOR REFORM.

GLYCEROPHOSPHATE COMP. AMPULS, 1 Cc., Squibb.—The Council on Pharmacy and Chemistry refused recognition to Glycerophosphate Comp. Ampuls, 1 Cc. Squibb, each said to contain sodium glycerophosphate 0.1 gm., strychnin cacodylate 0.0005 gm., and iron cacodylate 0.01 gm., because the name did not indicate the potent ingredients and because the administration of a mixture of sodium glycerophosphate, strychnin cacodylate and iron cacodylate is irrational. In recognition of the Council's conclusion, Squibb and Sons state that the sale of the ampules has been discontinued. This coöperation in the work of the Council on Pharmacy and Chemistry is gratifying. (Jour. A. M. A., Feb. 3, 1917, p. 388.)

EMETINE IN DYSENTERY AND PYORRHEA.—Emetine is accepted today as an almost ideal specific against amebic dysentery. Experience indicates that by its use abscess of the liver can be prevented and even cured. When a differential diagnosis between amebic and bacillary dysentery cannot be made, emetine may be of diagnostic value because improvement follows from its use if the case is amebic. In neglected cases and some other forms of the disease the emetine treatment may fail of complete success. As a direct cure for pyorrhea emetine seems to have failed, not because it does not act on the ameba which are found in the pyorrhea pockets, but because pyorrhea is not caused by ameba. (Jour. A. M. A., Feb. 3, 1917, p. 374.)

THE PHENOLSULPHONEPHTHALEIN TEST.—It has been assumed that excretion of less than 60 to 80 per cent. of phenolsulphonephthalein in two hours is an indication of renal insufficiency. It has been found, however, that in certain experimental conditions, phenolsulphonephthalein may be destroyed in the body and therefore not appear in the urine, although the kidneys function normally. If this condition is found to occur in clinical cases the interpretation of the tests may have to be limited to this: an excretion of 60 to 80 per cent., i. e., a positive result, within two hours after the injection of the phenolsulphonephthalein is evidence of satisfactory renal activity. (Jour. A. M. A., Feb. 3, 1917, p. 379.)

FATE OF TRYPSIN IN THE STOMACH.—Judging by recent experiments, it appears that the proteolytic enzyme of the pancreas isolated as trypsin is capable of withstanding a rather long digestion in presence of hydrochloric acid and pepsin, provided that sufficient protein is present to combine with all or a part of the acid and so bring the free acid down to a certain level. From the observations it seems possible

that some tryptic digestion may occur within the stomach when the free acid is low from combination with protein. The results do not, however, even remotely suggest that the administration of a few grains of the various commercial products claimed to contain trypsin or pancreatin would have the slightest therapeutic significance. (Jour. A. M. A., Feb. 17, 1917, p. 554.)

FIRWEIN.—The Council on Pharmacy and Chemistry reports that Firwein (The Tilden Company) is sold under the claim that when swallowed it has a "predilection" both for the bronchial mucosa and also for the genito-urinary organs. The Council finds that little information is given in regard to the composition of Firwein. As the composition of Firwein is secret, the therapeutic claims unwarranted and its use irrational, the Council declared it inadmissible to New and Non-official Remedies. (Jour. A. M. A., Feb. 17, 1917, p. 564.)

FIROLYPTOL PLAIN AND FIROLYPTOL WITH KREOSOTE.—The Council on Pharmacy and Chemistry reports that Firolyptol (The Tilden Company) is said to be composed of eucalyptol 10 drops, cotton-seed oil $\frac{1}{2}$ ounce, and Firwein enough to make 1 ounce, and that, as the composition of Firwein is secret, the composition of Firolyptol is also unknown except to the manufacturers. Firolyptol with Kreosote is said to contain, in addition to whatever may be the component parts of Firolyptol, 10 minims of creosote to each ounce. The advertisements for these two preparations seem to have for their keynote the assertion that cotton-seed oil is a particularly valuable nutriment and that when combined with the constituents of Firolyptol and Firolyptol with Kreosote it becomes particularly valuable to the tuberculous. The Council discussed the extravagant claims made for these proprietaries, reminds that food and fresh air, not drugs, constitute the fundamentals of the treatment of tuberculosis, and finds that neither of the products is acceptable for New and Non-official Remedies. (Jour. A. M. A., Feb. 17, 1917, p. 564.)

MORE MISBRANDED NOSTRUMS.—The following "patent medicines" were found misbranded under the U. S. Food and Drugs Act, chiefly because false and fraudulent therapeutic claims were made for them: Collins' Ague Remedy, admittedly containing $33\frac{1}{3}$ per cent. alcohol. Swain's Panacea, containing nearly 5 per cent. alcohol. 58.5 per cent. sugar, 0.1 per cent. salicylic acid and some sarsaparilla. Swayne's Panacea, essentially the same as Swain's Panacea in composition. Croxone, capsules containing a white pill and a red oil: the oil was oil of pine or oil of juniper dissolved in a fatty oil, while the pill consisted essentially of strychnine, a trace of brucine, aloin hexamethylenamin,

lithium carbonate, potassium nitrate and probably a trace of atropin. Freeman's Balsam of Fir Wafers, lozenges consisting of sugar with very small amounts of oil of turpentine and eucalyptus with the possible presence of balsam of fir. Renne's Pain Killing Oil, essentially a water-alcohol solution of sassafras oil and cayenne pepper, containing 76.8 per cent. alcohol and 4 per cent. volatile oils and possibly a little mustard oil and soap. Schuh's Yellow Injection, an aqueous solution of boric acid, carbolic acid and berberin. Schuh's White Mixture, a mixture of mucilage of tragacanth, balsam of copaiba, and probably sandalwood oil, flavored with cassia. Elmore's R'eumatine Goutaline, apparently a dilute tincture of colchicum. Armstrong's Croup Ointment, containing eucalyptus and traces of other oils, possibly cassia and thyme. Anticephalalgine, containing 30 per cent. alcohol and 4 grains acetanilid to the ounce, sodium bromid, sodium salicylate, caffein and antipyrin. Wright's Rheumatic Remedy, an emulsion composed principally of turpentine, methyl salicylate, sugar acacia, and water, with probably some resinous or plant extractive matter. H. G. C., a watery solution of borax and berberin sulphate. Russell's White Drops, containing 13 to 16 per cent. of alcohol as well as codein. Pneumovita, a sweetened gum, containing small amounts of charcoal and iron phosphate having a wintergreen flavor. Mecca Compound, an ointment containing carbolic acid, camphor, borates, zinc compound, sodium soap in a soft paraffin base. Best Cough Remedy, a spearmint syrup containing alcohol, chloroform and morphin. Stella-Vitæ, a female weakness remedy. Vegetable Pulmonary Balsam, a syrup flavored with spearmint, sassafras, containing alcohol and opium. (Jour. A. M. A., Feb. 17, 1917, p. 565-566; Feb. 24, 1917, p. 651.)

BINIODOL.—The Council on Pharmacy and Chemistry reports that Biniodol is claimed by the manufacturer, Charles C. Yarbrough, Memphis, Tenn., to be a solution of 1 per cent. mercuric iodid and 2.75 per cent. guaiacol in a vegetable oil, and that it is marketed with the implication that it is new and superior to other oil solutions of mercuric iodid. The Council found that the claims of novelty and of superiority were not substantiated by the evidence. Clinical investigation did not demonstrate the effects of Biniodol to be different from those of solutions prepared in the A. M. A. Chemical Laboratory, with and without guaiacol. The Council declared Biniodol inadmissible to New and Non-official Remedies because claims of superior efficiency were not established, and because it is an unessential modification of an established non-proprietary article marketed under a proprietary name. (Jour. A. M. A., Feb. 24, 1917, p. 650.)

JOURNAL OF MAINE MEDICAL ASSOCIATION

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Editorial Comment.

As it approaches the time for our spring and early summer vacations, our thoughts should turn to the dates of our state meeting. The House of Delegates have again chosen Portland, and Portland physicians will rise to the occasion and endeavor to supply a meeting place for some form of entertainment for the visiting members and their wives. We are unable to state anything definite at present writing concerning the literary programme, but can assure the members of the Maine Medical Association that they will have sufficient to make the 1917 session well worthy of their attendance. If any member has a paper or case report which he desires to present at this session he should immediately communicate with some member of the programme committee, as it is very difficult to rearrange a programme at the last minute to allow of some volunteer contribution. Remember the dates, June 12-13, in Portland. The committee consists of Dr. Lester Adams, Bangor; Dr. S. J. Beach, Augusta; Dr. A. L. Jones, Old Orchard.

Medical Legislation.

There are a large number of matters before the present legislative body which are of interest to the medical profession. A very important one which your legislative committee has been very active with is the osteopathic bill. As stated before, the proposed legislation would allow the osteopaths to practice medicine and surgery and the judiciary committee refused to act on it. After two or three conferences it was found impossible to reach any agreement with representa-

tives of the osteopathic societies, as they insist on some measures which would allow them to enter the field of medicine.

They have now submitted a bill which eliminates surgery and obstetrics and further specifies that, "This act will not give them the right to give medicines internally." In view of the fact that our present medical registration law cannot prohibit their giving medicines, they are prescribing medicines now, and the proposed act cannot give them the rights which they now hold. When your committee struck the words "poisonous and dangerous" out of our compromise act, the osteopaths very promptly objected.

To meet this issue fairly your committee has offered an amendment to our present act, which places an osteopath on our board but restricts his duties to the examination of the osteopathic candidates in their method of practice only. In all other branches he or she will be examined by the regular board. This proposed act also eliminates the old problem of drugs and gives the osteopath and the public the protection which is the sole reason they give for seeking a separate board. This bill should have the support of the profession of Maine, as it will better protect the public and maintain one standard of medical registration in Maine.

NEW AND NON-OFFICIAL REMEDIES.

TABELLAE DULCES ARISTOCHIN (Western), 1 grain.—Each tablet contains aristochin 1 grain, with cocoa, sugar and saccharine as vehicles.

TABELLAE DULCES HEROIN (Western), 1/100 grain.—Each tablet contains heroin 1/100 grain, with cocoa, sugar and saccharine as vehicles.

TABELLAE DULCES NOVASPIRIN (Western), $\frac{1}{4}$ grain.—Each tablet contains novaspirin $\frac{1}{4}$ grain, with sugar, starch, liquid petrolatum, saccharine, curcuma and oil of lemon as vehicles.

TABELLAE DULCES TANNALBIN (Western), 1 grain.—Each tablet contains tannalbin 1 grain, with cocoa, sugar and saccharine as vehicles.

TABELLAE DULCES TERPIN HYDRATE WITH HEROIN (Western), 1/100 grain.—Each tablet contains terpin hydrate $\frac{1}{2}$ grain, and heroin 1/100 grain, with cocoa, sugar and saccharine as vehicles. Western Chemical Company, Hutchinson, Minn. Accepted for the Appendix to New and Non-official Remedies. (Jour. A. M. A., Feb. 10, 1917, p. 461.)

Notices.

Campaign Against Unclean Dairy Utensils.

An active campaign against the unsterilized milk can, pail, strainer cloth and separator, as contributing causes to high bacterial count in city milk, is to be carried on this season by the U. S. Department of Agriculture in co-operation with the health and milk officials of a number of cities. Already health officers in 150 localities have accepted the department's offer to demonstrate to their local milk producers a simple, homemade sterilizer, costing not more than \$15.00, which if used on the farm will help guard the milk against this initial and serious contamination. How great a bearing sterilization of milk utensils on the farm has on the bacterial content of milk is shown by experiments which have proved that the average milk can, when washed in the ordinary way, may contain over eight billion bacteria, and that almost every milk can so treated harbors millions of bacteria, which give a high bacterial count and hasten the souring of milk.

The homemade sterilizer for dairy utensils which is to be demonstrated uses steam as a sterilizing agent. All that is required to develop steam enough to sterilize the ordinary dairy utensils is a two-burner kerosene stove, and there is nothing about the device which calls for special skill in its effective use. The department has twenty of these sterilizers, described in Farmers' Bulletin 748, and has offered to supply an outfit for a two-weeks' demonstration to any local health or dairy official who will agree to show it in operation to the milk producers in his section.

The effectiveness of this sterilizer has been fully proved both in the laboratory and on the farm. In one experiment ten gallons of fresh milk were divided into two parts. Five gallons, passed through a separator into a 5-gallon can, both utensils washed in the ordinary way, showed at the end of an hour 1,800,000 bacteria per cubic centimeter. The other five gallons, passed through a separator into a can, after both utensils had been washed and sterilized by means of the homemade sterilizer, showed only 24,000 bacteria per cubic centimeter.

The device, moreover, removes foul odors and leaves the utensils dry as well as sterilized. Experience shows that the bacterial count is thus materially reduced, while the producer finds that his milk does not sour so quickly and has an improved flavor.

The specialists of the Dairy Division are hopeful that the device, wherever it is demonstrated, will come into common use. It is believed that this sterilizer will find ready adoption among small dairymen because of its low cost of construction and operation, and because its use will tend to improve the quality and increase the keeping character of the milk.—*U. S. Department of Agriculture.*

County News and Notes.

YORK.

The wedding of Dr. Lawrence E. Millard, of Saco, and Miss Mollie Moore, daughter of Mr. Dayton T. Moore, of Biddeford, will be solemnized this month.

Dr. F. C. Lord, of Kennebunk, has been in New York City during the past winter taking a course of study.

Dr. J. D. Cochrane, of Saco, has recovered from his serious illness, caused by pneumonia, and has gradually resumed his practice.

Dr. George C. Precourt has been re-elected city physician in Biddeford, and Dr. Laura B. Stickney was elected city physician in Saco, Monday, March 19th.

Dr. Philip S. Sullivan, Bowdoin Medical, 1913, formerly located in Sanford, is now engaged in practice in Biddeford, his native city.

YORK COUNTY DAUGHTERS OF HYGIEIA.

The York County Daughters of Hygieia held their thirteenth quarterly meeting at Hotel Thacher, Biddeford, on January 4th.

The following members were present: Mrs. D. E. Dolloff, Mrs. C. F. Kendall, Mrs. H. W. Hurd, Biddeford; Mrs. C. E. Thompson, Mrs. R. L. Maybury, Saco; Mrs. C. E. Lander, Alfred; Mrs. W. W. Smith, Ogunquit; Mrs. C. E. Cook, South Berwick; Mrs. E. C. Cook, York; Mrs. A. L. Jones, Old Orchard.

The annual election of officers resulted as follows:

President, Mrs. W. W. Smith, Ogunquit.

First Vice-President, Mrs. C. E. Lander, Alfred.

Second Vice-President, Mrs. C. E. Cook, South Berwick.

Treasurer, Mrs. H. W. Hurd, Biddeford.

It was voted that each president appoint a secretary. The secretary and committees will be announced at the next meeting.

Dinner was served at the Hotel Thacher, after which the ladies attended one of the local theatres.

MEDICO-LEGAL.

AN ACT to create a State Department of Health.

Be it enacted by the People of the State of Maine, as follows:

SECTION 1. The governor, with the advice and consent of the council, shall appoint a state commissioner of health, who shall give his

entire time to such duties as shall be hereinafter designated and who shall have complete jurisdiction in all matters appertaining to the public health within the state of Maine. The department of which said commissioner shall be the head shall be known as the state department of health. Said commissioner shall be learned in sanitary science and shall hold office during good behavior subject to removal by the governor and council for cause shown and after public hearing. He shall receive an annual salary of four thousand dollars.

SECT. 2. The headquarters of said department shall be at Augusta and suitable rooms for offices and laboratories shall be provided for the use of said department. Said department shall furnish its own supplies and equipment out of the fund hereinafter to be provided for its use.

SECT. 3. The commissioner shall appoint five sanitary district inspectors, each of whom shall be physicians specially trained in sanitary science, shall receive salaries of twenty-five hundred dollars per year, and shall respectively have charge over the general health of such district as may be assigned to each. For the purposes of this act the state of Maine shall be divided into five sanitary districts, each of which shall be under a sanitary district inspector, which said districts shall be made up as follows: District No. 1 shall consist of the counties of York, Cumberland and Oxford; District No. 2 shall consist of the counties of Androscoggin, Franklin and Somerset; District No. 3 shall consist of the counties of Kennebec, Sagadahoc, Lincoln, Knox and Waldo; District No. 4 shall consist of the counties of Penobscot, Hancock and Washington; District No. 5 shall consist of the counties of Aroostook and Piscataquis. The sanitary district inspectors shall be under the immediate supervision and direction of the commissioner for the purpose of enforcing and carrying out the rules and regulations of the department and shall give their entire time to the duties of their office.

SECT. 4. Each inspector shall supervise the work of the local health officers in the municipalities in his district and may, when necessary, employ physicians as quarantine officers, which said physicians shall be compensated by the municipality in which they are employed, and the local health officers shall, under the direction of the inspectors, assist in enforcing this law, together with such rules and regulations as the commissioner shall promulgate. Such local health officers shall have jurisdiction in such matters as the commissioner shall determine, in addition to the powers now conferred upon such officers by law.

SECT. 5. There shall be such specialists, experts, scientists, and

other assistants appointed by the commissioner as are found to be necessary to carry out the purpose of this act.

SECT. 6. In any case where expense or damage is caused by reason of quarantine established under the authority of this act, such expense or compensation for damage done shall be paid by the town in which the quarantined person or persons are located, provided that the inspector deems it proper and wise to so order.

SECT. 7. It shall be the duty of the commissioner, and he shall have power:

1. To secure the proper and efficient regulation of the public health by the enforcement of this law and the rules and regulations promulgated hereunder.

2. To adopt and promulgate all needful and reasonable rules and regulations for the prevention and control of disease and for the preservation and maintenance of the public health and for the enforcement of this law and several provisions thereof; provided that these rules and regulations may be of continuous application throughout the whole or any portion of the state or for specified periods in parts thereof; provided further that the said rules and regulations upon their due publication for thirty days prior to their taking effect shall have the force of law; and provided also if such rules and regulations be of general application throughout the state that the publication thereof shall be given at the seat of government of the state of Maine at Augusta; if of local application, then as near such locality as possible; and if applicable to particular cases only their posting in a conspicuous place on or near the premises affected shall be sufficient and such a rule or regulation shall take effect immediately on posting and this shall constitute an exception from the requirements of publication for thirty days.

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3. To specify the powers and duties of the said inspectors and any and all employees of any nature which the commissioner may have power to appoint, to specify their terms of office and their salaries unless otherwise provided and to remove them for incompetence, malfeasance or corruption; and for the purposes of this act to regulate the said employees in any way whatsoever as he shall determine; to prescribe the limitations of all local health officers as hereinbefore provided, allowing them the power to use discretion in strictly local matters, limiting them therein as to expenditure which shall be entirely controlled by the said commissioner, and prescribing rules generally under which such local boards may work in conformity with the said department.

4. To create and establish such divisions of the said department as may be necessary for the proper and efficient administration of this law and the rules and regulations established hereunder and for the maintenance of the public health and general welfare.

5. To make recognizance of the interests of health and life among the people, inquire into the cause and source of disease and epidemics, observe the effect upon human health of

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"Of other fly poisons mention should be made, merely for the purpose of condemnation, of those composed of arsenic. Fatal cases of the poisoning of children through the use of such compounds are far too frequent, and owing to the resemblance of arsenical poisoning to summer diarrhea and cholera infantum, it is believed that the cases reported do not, by any means, comprise the total. Arsenical fly-destroying devices must therefore be rated as extremely dangerous, and should never be used, even if other measures are not at hand."

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localities, schools and employments, gather and collate statistics concerning the public health, make investigations relative to the sale of drugs and food and the adulteration thereof, advise the government as to the location and other sanitary conditions of water and sewer systems and have oversight as to all state officials and boards in hygienic and sanitary matters relating to the location, construction, ventilation, sewage and administrations of schools, hospitals, asylums, prisons, jails, and any public institutions and buildings, and to report annually to the legislature his finding as to the general public health; provided that this enumeration shall not be construed as a limitation on the powers of the commissioner as herein or elsewhere set forth.

6. To determine the amount to be expended out of the public health fund hereinafter created on any particular locality, or for any purpose in the furtherance and maintenance of the public health and to order such sum to be paid out of the state treasury in pursuance with the law for the use of said locality or purpose, to maintain and keep an accurate account of all expenditures out of the fund thus provided, furnishing a correct statement thereof to the state auditor for his supervision, and the commissioner shall include the said account in his annual report to the legislature as hereinbefore provided.

SECT. 8. Any and all violations of this act and of the rules and regulations established hereunder shall constitute a misdemeanor. The accused upon conviction may be fined in any amount not to exceed one thousand dollars, or imprisoned for a term not to exceed one year, or both fined and imprisoned as the court in its discre-



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tion may determine. The attorney general for the state of Maine, together with the several state's attorneys, shall each in his proper jurisdiction assist the said department in the enforcement of this act and otherwise by giving advice when requested.

SECT. 9. The legislature shall appropriate the sum of one hundred and fifty thousand dollars to be paid out of any fund in the state treasury not otherwise appropriated, annually for

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the purpose of carrying out the provisions of this act.

SECT. 10. All acts or parts of acts inconsistent herewith are hereby repealed.

Personal News and Notes.

Dr. John G. Towne, of Waterville, was appointed a member of the staff of Governor Milliken as surgeon general of the military forces of the state. Major Towne will succeed Major Bradbury, of Togus.

Dr. Arthur Gould, of Freeport, who has been ill, is able to resume his practice.

Dr. James D. Clement, of Seal Harbor, is studying diseases of the eye and ear in New York, at the Manhattan Eye and Ear Hospital.

Dr. Frank H. Jackson, of Houlton, has been nominated Medical Examiner for Aroostook County.

At a recent meeting the Augusta physicians agreed on the following schedule of rates: Day visits inside the mile limit of the postoffice, \$2.00; from 6 P. M. till 9 P. M., \$2.50; from 9 P. M. till 6 A. M., \$3.00. Eye, ear, nose and throat surgeons, examination at office, \$5.00; at house, \$10.00.

Dr. R. A. Holland, of Calais, who is spending the winter months in Daytona, Fla., expects to return about the first of April.

Dr. and Mrs. H. A. Lombard, of Bridgton, were in Washington for the inauguration.

Dr. Amelia Dickerson, formerly of Ashland, but at the time of her death on the medical staff of Woodmere hospital, Evansville, Ind., passed away recently of pneumonia.



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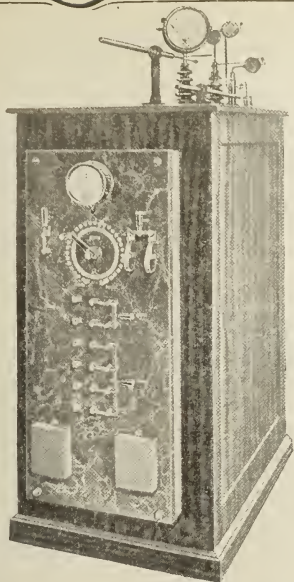
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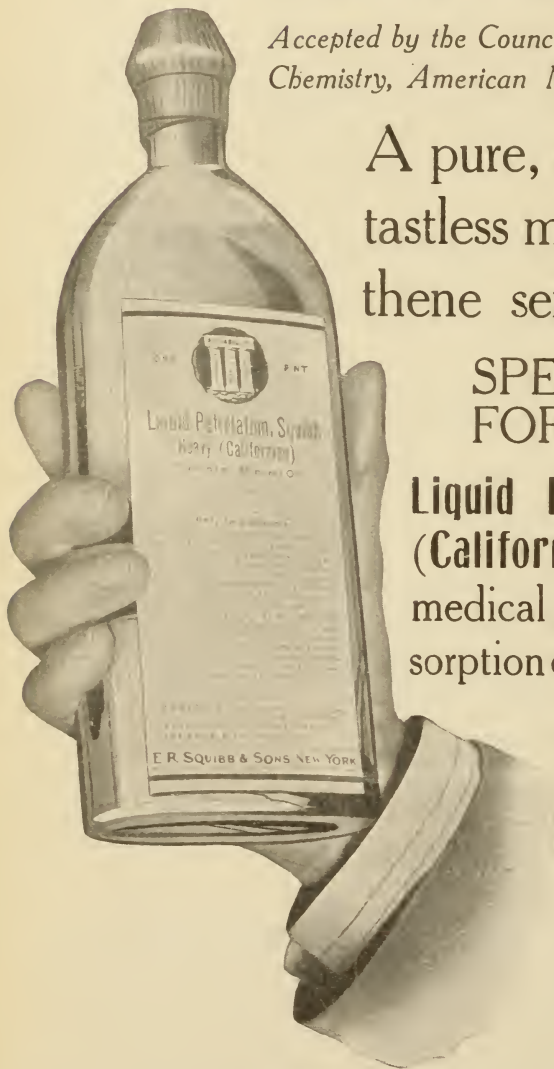
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The Official Organ of the State and County Medical Societies.

VOL. VII, No. 9

APRIL, 1917.

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TABLE OF CONTENTS

Original Articles—

Surgical Syphilis.....	273
Medical Preparedness.....	286
Danger of Fly Poisons.....	295
New and Non-Official Remedies....	296
State Program.....	297

Editorial Comment—

Medical Preparedness.....	298
National Board of Medical Examiners	299

Miscellaneous—

Commercial Notes.....	301
Notices	302
County News and Notes.....	303
Personal News and Notes.....	VII

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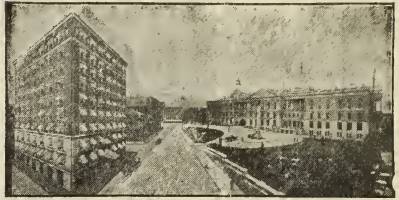
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VOL. VII.

APRIL, 1917.

No. 9

*SURGICAL SYPHILIS.

By WM. PEARCE COUES, M. D., Boston.

In consideration of some of the lesions of syphilis requiring surgical treatment, either conservative or operative, or entering into the field of surgical diagnosis, it is wise to look backward for some years and find the causes that have made syphilis of so much more importance of late to the surgeon as well as the internist and general practitioner. Three great factors have been responsible for the recognition of the fact of the great amount of heretofore unrecognized syphilis.

First, in order of time, was the discovery of the X-rays by Roentgen; next came the discovery of the true cause of syphilis, the spirocheta pallida, by Chaudinn and Hoffman; and finally the adaptation of the Bordet-Gengou complement fixation test to syphilis by Wassermann. These three factors have led to the discovery of many cases of syphilis which would have been unrecognized formerly. The Wassermann reaction has become practically a routine measure in connection with all cases of a chronic character in general hospitals. When we realize that probably not far from 20 per cent. of all cardiac disease is due to syphilis, and that an estimate that 18 or 20 per cent. of surgical out-patients are syphilitic is near the truth, it will be seen what an importance syphilis assumes in connection with surgery. This means that in operating in the ordinary run of hospital and out-patient work, in one of every five or six cases syphilis may have to be reckoned with. In this connection it is of interest that in a large medical out-patient clinic in Boston on a change of service, the first thirteen con-

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secutive patients were found all to have positive Wassermann reactions.

Surgical syphilis may be defined as follows: The lesions of syphilis which require surgical treatment, either conservative or operative, in conjunction with external, internal or combined medication of a specific nature. Added to this will be those manifestations of the disease which simulate surgical conditions demanding operative intervention.

The need of surgical knowledge by those dealing with the protean phases of this disease is as old as the disease itself. The number of surgical conditions which syphilis can simulate is truly remarkable, and a knowledge of this fact is essential to the surgeon in his everyday work. Unfortunately it is not until very recently that even a very few surgeons have become alive to the importance of this fact. The tertiary lesions of syphilis affecting the internal organs are those most often confounded with other troubles, as we shall see later. Gummata of the skin, soft parts directly under the skin, bursal surfaces and joints, fascia and muscle, either broken down or still intact, form a large class of the cases that require surgical aid. In the abdomen there is a large class of cases in which the diagnosis is impossible before operation. Some of these turn out to be gummatous inflammation of various organs. Nothing is known of syphilis of the peritoneum, especially gummatous inflammation, which undoubtedly exists, and it is more than probable that some cases supposed to be tuberculous peritonitis are in reality gummatous peritonitis. This is analogous to the same conditions in the cervical lymph glands, where I have shown that a gummatous adenitis has been confounded with tuberculosis not infrequently.

An insight into the historical side of surgical syphilis, as well as a few words as to the history of syphilis in general, is an aid to our understanding of all that has gone on before to make up the sum of our present knowledge. It is thus in all the history of medicine, the present discoveries and aids in treatment are a product of the centuries that have gone before, and without the background of the past, with all its great workers, there is nothing.

When did syphilis first appear in the world? Is it as old as the human race, or has it been evolved and propagated from some time far distant, centuries or tens of centuries perhaps, but in the counting of time from the first primitive men perhaps fifty thousand years or more ago, as a brief hour only? Some of the greatest men of science have for years been occupied with the subject, and definite conclusions have been drawn from the mass of evidence in their hands. The consensus of opinion of many of those who are authorities on the sub-

ject is that there was no syphilis in the old world previous to the discovery of America by Columbus in 1492. Recently Sudhoff, director of the German Institute of Historical Medicine, and one of the greatest living medical historians, has combated this view. Nevertheless the weight of opinion seems to be on the other side of this question. According to that great authority, Iwan Bloch, syphilis appeared in Spain in the spring of 1493. He says, moreover, that not a syphilitic bone, that is, a bone bearing indubitable evidence of syphilis, has ever been found in the old world, where the skeleton from which it came antedated 1493. Many of the arguments that have been adduced tending to show the presence of pre-Columbian syphilis in Europe do not bear searching and critical analysis. We know that for a period of five thousand years the people in the valley of the Nile were probably free from syphilis, no bones characteristic having been found, though it has been shown that rheumatic bone disease was common. In the time of the Roman Empire none of the great historians of the times mention the symptoms of the disease. All dermatological troubles were, we know, very much jumbled up at this time, and such affections as epithelioma, leprosy, and the less serious dermatological ailments were in no way differentiated. It would, nevertheless, be surprising indeed if such a disease as syphilis were present, that its more or less accurate description should not have been given by such a keen observer as Celsus, whose description of tuberculosis about 54 B. C. is classic to this day. There does not seem to be much doubt that syphilis was present in the new world long before it appeared in Spain in 1493. There is evidence that it was known in Mexico, and that the frequency of bone syphilis, as well as the possibility of syphilis of the central nervous system, was recognized. Guaiac was, according to Power¹, used as a cure, and there is evidence that the disease was probably extremely common here and in the West Indies. There is pretty good evidence that some of Columbus' crew became infected and brought the disease back with them to Lisbon, where Columbus landed on March 6th, 1493. Power tells us that Ruy Diaz de Isla, a practicing physician of Barcelona, who was a skillful one as well, states that the disease was unknown in Barcelona until 1493; he had the opportunity of treating several members of Columbus' crew, and tells us that syphilis spread rapidly through Spain and then to the rest of Europe from this time on. We know that the disease was rife in the army of Charles the eighth in Italy in 1493, and from this time on the disease seems to have been firmly established in Europe, was much written of, and soon crossed the channel to England and Scotland, where it was written of in 1503. Many writers interested in his-

torical medicine have alluded to the wonderful knowledge of the symptoms of the disease possessed by William Shakespeare.

Definite knowledge of many of the more obscure manifestations of syphilis would seem to be of fairly modern times, but it is interesting to look back for a brief period to the early beginnings of definite knowledge of the symptoms of the disease, especially manifestations of a surgical nature, and the theories as to its propagation. We find that Paracelsus², that medical mountebank, but none the less brilliant man, first taught that syphilis might be transmitted to the offspring during pregnancy. He was also the first, it is said, to use mercury for the cure of the disease. This was in about 1526, thirty years after syphilis was a common disease in Europe. Angier Ferrier², in 1553, taught that congenital syphilis could be of maternal origin. Van-Helmont², in the seventeenth century, taught that the disease could be transmitted through several generations. Raulin and Chanchez² taught the same at the end of the eighteenth century. This was at the time that Hunter was teaching that hereditary syphilis was an impossibility. It is interesting to note that the great Fabricius saw congenital specific children born with exostoses present. Sanchez, mentioned above, recognized certain dystrophies which he thought were due to congenital syphilis, as has Fournier in the nineteenth century. Sanchez recognized spina ventosa, or dactylitis, as often of specific origin, and was the first to recognize enlargement of the glands of the neck, due to congenital syphilis.

Jean Astruc, a celebrated French physician who lived in the seventeenth century (1684-1766), wrote a most illuminating work on syphilis, and his descriptions of surgical syphilis, particularly bone syphilis, are accurate to this day. Incidentally this remarkable man, wise far beyond his time, recommended excision of the axillary glands as well as the whole breast, for carcinoma.

John Hunter, by his ill-advised conclusions from his experiments, put the true knowledge of the separate entity of syphilis and gonorrhea back for many years. Hunter (1767), it is well known, inoculated himself with the pus from a gonorrhea, and after some time a typical chancre appeared. This unfortunate turn of the experiment was, we know, due to a simultaneous infection with the spirochete and the gonococcus of Neisser. We note at times exactly the same result at the present time, when we see an apparently typical soft sore and bubo run their course, and the sore assume the characteristics of an initial lesion sometime later, and secondary manifestations develop, as usual, double infection. Proksch tells us the story briefly and to the point as follows (Bloch): "Hunter dealt the most terrible blow to the doctrine of the involvement

of the internal organs by syphilis. With a few calmly written words he annihilated a doctrine which for three centuries had been proved upon countless bodies and accepted by all the physicians in the world." Hunter then died himself, probably a victim of the ravages of the spirocheta in his aorta.

Ricord, 1889, showed without question that Hunter's conclusions were based on false premises, and made two thousand five hundred inoculations of gonorrheal pus, not one of which produced a chancre or general syphilis. From this time on the gradual unraveling of the complex problems incident to a more complete understanding of the disease became a more simple matter. The discovery of the causative organism of syphilis by Chaudinn and Hoffman proved to be the last link in the tortuous chain of evidence to a more complete understanding of all the former manifestations and perplexing problems.

In regard to the question of surgical syphilis, which directly concerns us at present, we must bear in mind the modern theory of spirochetal permeation of the body as described by Swift and Ellis. There is a gradual permeation—almost, we might say, a saturation—of the body with spirochetes, extending from the chancre through the lymphatics, in an ever-widening area, until the whole body is invaded, but much of this invasion may be without symptoms. Probably the constitutional symptoms at the time of the invasion of the secondaries are an index of this, causing the spirochetemia.

As the first part of our study of the different manifestations of surgical syphilis we shall consider syphilis of the bones. Skeletal syphilis is one of the most important divisions of our subject, as it is concerned not only in our efforts at treatment, but gives us also precious aid in diagnosis, in cases where syphilis of other parts is suspected. Our knowledge of this subject has been greatly enhanced by the science of radiography, and many cases of obscure syphilis have been discovered through its aid. We must consider several types of bone involvement in syphilis, both in the acquired and congenital forms. To begin with, we shall consider specific periostitis, and its diagnosis and treatment. Specific disease attacking the periosteum gives rise to a chronic inflammatory process which finally leads to a definite annular thickening of the periosteum and outer layers of the cortex. It is important surgically from many standpoints. If we would disabuse ourselves of the term "traumatic periostitis" we should do well, for most of these cases are really specific. We may get no specific history, and this is particularly true in case of women. Such a case must be treated for a long time, and not only for the time it takes the periostitis to get well. The treatment may be somewhat guided by the Wasserman test,

if it is positive, but it is very often negative in these cases of long-standing bone disease.

We must remember regarding syphilis of bone that, although the bone lesions are for the most part constructive ones, rather than destructive, like tuberculosis, we may get a rarefaction in the epiphyseal regions, especially in congenital syphilis, as shown by the radiographic picture. We may see in these cases a constructive process (osteoperiostitis) going on lower or higher, in the shaft of the bone. Sometimes the periosteal and osteoperiosteal process may go on for a very long time without much of any symptoms. After a time the whole bone is hardened, and the medulla becomes sclerosed. As Sir Jonathon Hutchinson³ has pointed out, probably most of the very large, rough, heavy bones in our pathological museums are evidence of this process. It is wise to remember the two chief causes of tender shin bones in adults, heart disease and syphilis. When radiographs of these bones are taken, the thickening shows best in a lateral view, and the thickening is seen on the outer border of the leg bones most often. Salvarsan or mercury and iodide of potassium will cure or better these conditions, if the sclerosing process has not advanced too far. We take radiographs of these bones before and after such treatment, and sometimes see that the bones are much or entirely smoothed out, thus making a very interesting demonstration, and a most convincing one. I have spoken of the rarefaction about the epiphyses in congenital syphilis, and we must remember that a not inconsiderable number of cases of acute suppurative epiphysitis (osteomyelitis) in children have a definite specific background. We know that the epiphyseal line is a weak place, especially in congenital syphilis. Nichols⁴ has shown that in these cases there is an epiphysis that perhaps has no demonstrable ossifying center, an irregular epiphyseal line on the side next to the shaft, then a failure of the epiphyseal cartilage to turn into bone. All of which makes it easy to understand how simple it is to get a separation of the epiphysis in these cases. The well-known syphilitic pseudo-paralysis of extremities of infants with congenital syphilis, I think, described by Parrot, is due to this.

Besides the periostitis and general sclerosing process we have in bone a localized gummatous process also, of very great importance in our consideration of surgical syphilis. This sometimes is seen as taking the form of a gummatous osteomyelitis, and we must be on our guard in cases of osteomyelitis, especially the ones that are atypical, to consider the possibility of syphilis. It would, however, be better to operate on fifty cases where this was suspected than to let one go without operation, because of this possibility; acute osteomyelitis is of

course understood. In gumma of bone in contradistinction to a sclerosing, as in the osteoperiostitis, there is a softening of the bone by the gummatous process, and this may affect the cortex and later the medulla (gummatous osteomyelitis). We must be on our guard to differentiate these conditions from sarcoma of bone, as the treatments are so radically different. Dactylitis of specific nature is a gummatous osteomyelitis, and we may see a phalanx absorbed and the characteristic shortening of the finger, and the spindle-shaped swelling. These cases are apt to be confused with tuberculous dactylitis. A Wassermann test and radiographs of other bones will usually settle the question, but we must remember that the Wassermann may be negative, and the process still be a specific dactylitis. Microscopically it is in some cases impossible to tell a gummatous process from a tuberculous one, and when tubercle bacilli are absent the pathological examination will leave us in doubt. Syphilitic bone disease has been operated on for ordinary osteomyelitis, for tuberculosis of bone, for typhoid ostitis, and for new growths of bone (Nichols⁴). This shows us well the immense importance of a thorough knowledge of bone syphilis. Every effort should be made to rule out syphilis in operating on cases of obscure bone disease, not that they may not demand operation, but so that appropriate specific treatment may be given also. We should remember that syphilis attacks, or is more apparent in the bones of stress, and that is the reason it is so common in the tibia.

The effect of syphilis on the healing of fractures is a subject of much interest and importance and one that has not been studied of late to any extent. Most of the clinical work on this subject has been done in France in former times, and since the admirable work of Geile⁵ not much has been written that is worth while. The question of the Insurance Liability Act makes the subject of added interest at present. We must remember that a previous syphilis may delay or cause only fibrous union in a fracture, and that this may not be recognized by the attending surgeon. Indeed, some surgeons and authorities on fractures deny that syphilis has any influence on the time of healing of fractures, or that it can be responsible for fibrous union. These gentlemen are not familiar with the work that was done in France on the subject some thirty years ago, or they would not be skeptical. It behooves us to look for syphilis searchingly in every case of non-union, for, as has been observed, the union of bone that has suffered a solution of continuity may be much delayed by a silent syphilis. In a previous article, "Syphilis and Trauma", I gave the findings of one well-known surgeon in regard to this matter. This surgeon had a Wassermann test made on all the cases of ununited fracture in his clinic for a year.

Every one was positive. We should take radiographs of other bones in every case of non-union of fractures, as well as those with pseudoarthrosis. These cases should have specific treatment, unless there is definite reason for the non-union, such as the interposition of soft parts or other definite cause. All cases of fracture by muscular violence alone, and all cases where the force has not been in our estimation sufficient to break a normal bone, should be scrutinized closely with syphilis in view. If there is no bone cyst to account for the fracture, the chances are quite good that a rarefaction due to syphilis is at the bottom of it. *Fragilitas ossium* itself may be due to syphilis and some writers have claimed the same for Paget's disease. In this country the contention is regarded lightly by those who should know that dogmatism in medicine is most unsafe. Hutchinson claims that atypical Paget's disease without enlargement of the bones of the head is almost always syphilitic. In these cases the skull will be thicker than normal, but the external diameter will not be increased.

A number of uncommon manifestations of syphilis, either congenital or acquired, are of direct surgical interest, and are more often seen in our large out-patient surgical clinics and to a less extent in private practice. Such conditions have been described by Verneuil^a (luetic bursopathy), of which I have been fortunate enough to recognize a few cases. "Clutton's knees," or symmetrical serous synovitis of the knee joints, which is not to be confused with the bursal conditions mentioned above, is another instance of the rare syphilitic manifestations of interest to the surgeon. Clutton first described this condition in a paper in the *London Lancet* in 1886. The association of this symmetrical synovitis of the knees with Hutchinsonian teeth and interstitial keratitis was practically constant. Post has recently reported a case in a young adult. This was published in the *Boston Medical and Surgical Journal*.

The possible relation of myositis ossificans to syphilis in certain cases is of much interest. A recent case of the traumatic variety of myositis ossificans which I saw for the Industrial Accident Board last winter, where an old syphilis was also found through skeletal radiographs, brought this subject to my attention. Briefly, the traumatic history of the case was as follows: A middle-aged working man, seemingly in good health, fell from a ladder while at his work. His fall was only a few feet, but in falling he struck his right elbow against a rung of the ladder. There was immediately some disability of the elbow, which rapidly grew worse. The elbow grew stiffer and more rigid, and in a few weeks' time flexion and extension were impossible. Examination showed the elbow flexed at a right angle, a hard mass of

bony consistency occupying almost the whole of the lower portion of the brachial anticus muscle. In some months this man was seen again, when the mass had almost disappeared, and the movements of the elbow were nearly normal. The Wassermann was negative. This man had been advised immediate operation at one of our large hospitals. This is incorrect treatment for such cases, as waiting until the mass has shrunk down, before operating, gives better results. The possibilities of a connection between the previous syphilis, in this case, and the myositis was brought to my mind by E. A. Codman, to whom I showed the radiographs of both conditions. Codman operated upon a case of myositis ossificans at the Massachusetts General Hospital some years ago, and this case was also associated with syphilis. C. A. Porter, in a personal communication to me concerning this subject, says that Kolisho, in Vienna, first brought his attention to the matter. Kolisho demonstrated a case at autopsy. This was a man of about fifty years, with tabes, and a probable Charcot knee. Kolisho spoke of myositis ossificans not being of infrequent occurrence in cerebral syphilis and tabes. The case he demonstrated had bony casts of the psoas, pyramiformis and the gemelli. It is of interest that in the case I have mentioned above the mentality was very sluggish, and with the radiographic findings at least strongly suggested the possibility of nervous syphilis. Although these cases are rare, it is wise to have in mind Kolisho's dictum in regard to them. It is manifestly impossible in a paper of the present scope to treat the subject of surgical syphilis in great detail, but it is hoped that the brief report of a few clinical cases well illustrating the subject will be of interest. We shall consider briefly cases illustrating syphilis of the cervical lymph glands, syphilis of the stomach, and syphilis of the testicle, and then add a few striking cases from the literature.

In our surgical clinic at the Boston Dispensary we have paid particular attention to the question of obscure surgical syphilis. The following case is an example⁷: A girl of eight years was seen in October, 1914, with what had been diagnosed as tuberculous cervical adenitis of three months' duration. There was a large mass of glands under the right maxillar, reddened, and seemingly fluctuant. No definite signs of syphilis were found, and the Wassermann and Von Pirquet tests were both negative. The tonsils and adenoids were removed, and the glands incised, swabbed with iodine, and drained. Dr. Mallory reported that the tissue examined was more suggestive of gumma than of tuberculosis. Specific treatment was then instituted—at first mercury and chalk, and the glands were curetted, and much debris removed. There was a marked improvement in the child's general health under the mer-

cury, but very little in the local condition. Three injections of .2 grms. neo-salvarsan were now given in the Dermatological Department. The effect was almost magical. In February, 1915, the child was discharged well, the glands had all retrogressed to normal, and there was a soft, supple scar. The family history, which was given untruthfully, and learned correctly later, was as follows: The first child was still-born; one child died at four months; twins, the fifth pregnancy, were premature and stillborn. The father later told me that he had had syphilis and had never had any treatment. This case teaches us the lesson of careful examination and history in atypical cervical adenitis.

The question of syphilis of the stomach, which is probably not infrequently unrecognized, is of much interest to the surgeon, internist and general practitioner. No stomach operation for ulcer should be done without taking its possibility into account. Probably from five to six per cent. of stomach ulcers are due to syphilis. Radiographically it is very hard to differentiate these cases from carcinoma of the stomach. I am indebted to my friend, Dr. H. P. Smithwick, of Boston, for notes on the following interesting case which proved syphilis as far as it is possible to prove anything clinically: The past history in brief of this patient was as follows: A man of thirty-one, occupation a type-setter. He had had gonorrhea twice, the last time three years before, "soft chancre" more recently. The patient says it was cured in one month by local treatment. No further examination of the patient was made at this time, and the suggestion was apparently never made or thought of by the physician then treating him that the sore might have been a primary lesion. Present illness: Stomach trouble began one year ago, with distress, at first a few minutes after meals. There was no vomiting, but the distress became intense. Solid food caused the most trouble, and he also suffered from cramp-like pains across his stomach at night. His weight a year ago was 178, and is now only 117½. There were no signs of nervous syphilis found, the pupils reacted to light and distance, and the knee jerks were present. The blood Wassermann was strongly positive. There was no occult blood in the stools and the urine was normal. Radiographs showed a typical hour-glass contraction of the stomach, with the isthmus high up. .9 grm. neo-salvarsan were given and a week later food caused no trouble. In two weeks' time the man was free from symptoms. From August 25th to September 25th he had four injections of either salvarsan or neo-salvarsan, .6 grm. or .9 grm. respectively. March 18th and 26th he had .6 grm. diarsenol, and this was repeated in April and May. He also had mercury and iodide pushed to the limit of toleration. He gained weight rapidly. He had suffered intensely before

specific treatment was given. He has remained symptomatically well. No treatment had the slightest effect on the condition except the specific treatment. Undoubtedly, I should judge that the gummatous ulcer had been present so long without treatment that much cicatricial tissue had formed, which probably accounts for the slight amount of change in the radiographs taken after symptomatic cure.

Syphilis of the testicle is of interest on account of the confusion of diagnosis with other troubles, and its reaction to the newer specific remedies. M. S., thirty-four years of age, single, was referred by a former patient in 1915. He was a man of fine physique and apparently in fair health, but complained of a good deal of headache. There was nothing suggestive in the family history. He denied having had gonorrhea, but remembered having had a chafed place on the penis six years ago. A physician told him, however, that he had syphilis. He remembered no rash or sore throat. The left testicle was uniformly enlarged, smooth, and somewhat tender to pressure. The left seminal vesicle was enlarged and was very tender to rectal touch. No gonococci were found in the expressed contents of the vesicle by three competent examiners. The blood Wassermann was positive. The testicle had been enlarged for six months, but it was not always of uniform size. To be brief, three intravenous injections of neo-salvarsan, combined with mercury and iodide treatment, brought the testicle to normal again, with no pain, by April, 1915. The vesicle was no longer tender, and was not enlarged to rectal touch. The patient developed a gummatous ulcer of the leg at one time, between treatments, which was cured by mercury. In April he was well, and his physical condition perfect. Careful examination showed no signs of nervous syphilis. The difficulty sometimes encountered in differentiating the diagnosis of gumma of the testicle from that of tuberculosis and sarcoma must always be borne in mind. In a former paper I cited the fact that a portion of an excised testicle was submitted for examination to three competent pathologists, one pronounced the disease sarcoma, another gumma, and a third tuberculosis. After a time the other testicle became enlarged, and was cured by iodide of potassium.

Whether there was a gummatous infection of the seminal vesicle in the case I have reported above, it is hard to say, but the association with the gumma of the testicle makes it probable. No cases of gummatous inflammation of the seminal vesicle have been reported to my knowledge.

Perhaps there is no common surgical trouble the etiology of which is so indefinite as acquired hydrocele. The vaguest statements are

made as to this in the text-books. I have long thought that syphilis might play a role in the production of some cases. This has never been proved to my knowledge. The following brief report of a case may be of interest in this connection. As the case of stomach syphilis reported above, it would seem clinically to be due to syphilis, at least the sudden cure and failure to recur, as most hydroceles do, even with repeated tapping, would seem to point strongly to this conclusion. A chauffeur, single, of thirty-three years, was seen Sept. 4th, 1911, for the first time. He had always been well and strong. He had had gonorrhea twice, the last time being one year before. Denied syphilis. He had been continuously exposed to the possibility of gonorrhea and syphilis. Two days before noticed small sore on penis. To this he applied a strong solution of nitrate of silver before I had seen him. The sore was not only cauterized, but also a large area of skin around it. Examination showed a clean-cut small ulcer with some greyish slough in the center. No definite opinion was given at this time, but observation and microscopic examination was urged, but was refused. The man later developed secondary syphilis, and was given elsewhere one injection of salvarsan, and then merury and iodide. Treatment kept up well. No tertiary manifestations, but some sore throat. Examination for nervous syphilis repeatedly negative for five years. Blood Wassermann negative in 1915. Aug. 25, 1915, consulted me for an enlargement of the right side of the scrotum of some weeks' duration. Other than this the man had been perfectly well. Examination showed no obvious specific lesions. The right side of the scrotum was tense, elastic, and translucent. There was no hernia. Diagnosis of acquired hydrocele was made and tapping recommended. It was thought wise to give vigorous specific treatment first. A few weeks of inunctions and iodide in large doses resulted in a perfect cure and entire disappearance of the fluid. The patient has been under observation ever since and there has been no return of the hydrocele. Perhaps this was a case due entirely to spirochetal infection. It seems of interest on account of the general haziness concerning the etiology of this clean-cut surgical condition.

In the first part of the paper we alluded to the difficulty of diagnosis in connection with syphilis of the abdominal organs and the perplexing problems that confront the surgeon in this connection. Gunther⁸, in *Therapie der Gegenwart*, reports a most interesting case of this kind. A woman of thirty-one years had gall-bladder pain in 1906. Became very severe, and later was accompanied by vomiting. The gall-bladder was drained, and gall-stones were removed. The pain persisted and at last a cholecystectomy was done. In 1910 pain and trouble in the gall-

bladder still persisted, and cancer of the liver with metastasis was suspected. Potassium iodide was, however, given, and later salvarsan. The patient developed a gumma of the leg and died a month after the salvarsan had been given. At autopsy a gummatous cirrhosis of the liver was found. Gunther points out that the shifting symptomatic picture, improvement under iodide, and the fever, an index of the absorption of gummatous products, the breaking-down causing chills and high fever, should have warned as to the probability of a syphilitic affection. The patient had been under hospital care and observation for some years, but syphilis was not thought of until a comparatively recent time before death.

Gayet and Favre⁹, in the *Journal de Urologie*, July 15, 1916, Vol. VI., No. 1, report on syphilis of the bladder, a condition to which very little attention has been paid. The hematuria in their three cases subsided at once when antisyphilitic treatment was used. In each case the hematuria came on suddenly, and recurred, uninfluenced by local treatment. Cystoscopic findings showed bladder ulcerations, which was supposed to be characteristic of syphilis.

Of late syphilis of the mediastinum has been observed to be a not infrequent tertiary manifestation, and is very important surgically, on account of its nearly exact simulation at times of malignant mediastinitis, usually a metastatic process. Such cases are always difficult of diagnosis, even at the present day, with all the modern diagnostic tests at our disposal. Dieulafoy¹⁰, among others, has recently reported a most interesting case of syphilis of the mediastinum. There were no definite symptoms of syphilis, and there were symptoms indicating a tumor pressing on the vena cava and adjacent structures. The patient was a man of sixty-three years, supposedly healthy. Operative intervention was decided on, but a tentative course of mercury was given first, and this led to the disappearance of all symptoms in one month. Each case of this kind reported is of value, in showing the many and varied conditions syphilis may simulate. It is the practice of Dieulafoy now to give mercury in every obscure organic trouble, where the definite cause cannot be found. He does this even if the Wassermann reaction is negative.

Of late a few cases of syphilis of the bladder have been reported, as cited above, and there is evidence accumulating that the so-called essential hematuria of chronic nephritis is sometimes due to syphilis. Brooks¹¹ has recently reported a very rare and instructive case of syphilis of the body of the uterus, and gives the findings in detail. Such cases are manifestly uncommon, but if the possibilities are always in mind concerning syphilis, they will be more often recognized.

It is hoped that this paper will emphasize the importance of having syphilis in mind in all obscure lesions that the surgeon sees. We must not, on the other hand, be hasty in arriving at conclusions which give syphilis an undue share in the etiology of such cases. Having an open mind, we must not neglect to take advantage of the irrefutable facts concerning the increased frequency with which unusual manifestations of this disease are brought to light.

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MEDICAL PREPAREDNESS.

Under existing conditions it is desirable that every physician, as well as every other loyal citizen of America, should be prepared to render active service to the Federal Government, remembering that the protection afforded by the government has made it possible for its citizens to enjoy liberty, peace and prosperity.

The avenues through which the most effective service can be rendered by members of the medical profession have taken definite and concrete form. Briefly, the plan is that all medical activities should coöperate with the Council of National Defense.

It would seem desirable at this time to state explicitly just what the Council of National Defense and its various agencies are.

The Council of National Defense was created by Act of Congress, August 29th, 1916,

"Sec. 2. That a Council of National Defense is hereby established, for the co-ordination of industries and resources for the national security and welfare, to consist of the Secretary of

War, the Secretary of the Navy, the Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce, and the Secretary of Labor.

"That the Council of National Defense shall nominate to the President, and the President shall appoint, an advisory commission, consisting of not more than seven persons, each of whom shall have special knowledge of some industry, public utility, or the development of some natural resource, or be otherwise specially qualified, in the opinion of the council, for the performance of the duties hereinafter provided. * * *

"That the Council of National Defense shall adopt rules and regulations for the conduct of its work, which rules and regulations shall be subject to the approval of the President, and shall provide for the work of the advisory commission to the end that the special knowledge of such commission may be developed by suitable investigation, research and inquiry, and made available in conference and report for the use of the council; and the council may organize subordinate bodies for its assistance in special investigations, either by the employment of experts or by the creation of committees of specially qualified persons to serve without compensation, but to direct the investigations of experts so employed."

A committee of distinguished physicians was asked to present to the President names of medical men suitable for membership on the advisory commission. Dr. Franklin H. Martin, of Chicago, was selected.

The following statement was issued by President Wilson on the night of October 11, 1916, in announcing his appointment of the civilian advisory members of the Council of National Defense:

"The Council of National Defense has been created because the Congress has realized that the country is best prepared for war when thoroughly prepared for peace. From an economic point of view there is now very little difference between the machinery required for commercial efficiency and that required for military purposes.

"In both cases the whole industrial mechanism must be organized in the most effective way. Upon this conception of the national welfare the council is organized in the words of the act for 'the creation of relations which will render possible in time of need the immediate concentration and utilization of the resources of the nation.'

"The organization of the council likewise opens up a new and direct channel of communication and coöperation between business and scientific men and all departments of the government, and it is hoped that it will, in addition, become a rallying point for civic bodies working for the national defense. The council's chief functions are:

"1. The co-ordination of all forms of transportation and the development of means of transportation to meet the military, industrial and commercial needs of the nation.

"2. The extension of the industrial mobilization work of the Committee on Industrial Preparedness of the Naval Consulting Board, and complete information as to our present manufacturing and producing facilities adaptable to many-sided uses of modern warfare will be procured, analyzed and made use of.

"One of the objects of the council will be to inform American manufacturers as to the part which they can and must play in national emergency. It is empowered to establish at once and maintain through subordinate bodies of specially qualified persons an auxiliary organization composed of men of the best creative and administrative capacity, capable of mobilizing to the utmost the resources of the country.

"The personnel of the council's advisory members, appointed without regard to party, marks the entrance of the non-partisan engineer and professional man into American governmental affairs on a wider scale than ever before. It is responsive to the increased demand for and need of business organization in public matters and for the presence there of the best specialists in their respective fields. In the present instance the time of some of the members of the Advisory Board could not be purchased. They serve the government without remuneration, efficiency being their sole object and Americanism their only motive."

As indicated above the Council of National Defense, therefore, consists of six members of the Cabinet as follows:

The Secretary of War, Chairman.
The Secretary of the Navy.
The Secretary of the Interior.
The Secretary of Agriculture.
The Secretary of Commerce.
The Secretary of Labor.

The Advisory Commission of the Council of National Defense

consists of seven civilians appointed by the President. The members of the Advisory Commission are as follows:

Mr. Daniel Willard, President of the Baltimore and Ohio Railroad, Chairman.

Mr. Hollis Godfrey, LL. D., President of Drexel Institute, Philadelphia, Pa.

Mr. Howard E. Coffin, of Detroit (who is also chairman of the Committee on Industrial Preparedness of the Naval Consulting Board).

Dr. Franklin H. Martin, of Chicago.

Mr. Bernard Baruch, Financier, of New York.

Mr. Julius Rosenwald, Vice-President of Sears, Roebuck & Company, of Chicago.

Mr. Samuel Gompers, President of the Federation of Labor.

The two bodies meet in joint session at frequent intervals for the purpose of considering problems relating to national defense.

The executive activities of the Council of National Defense are co-ordinated and carried out through the medium of the Director of the Council of National Defense, Mr. W. S. Gifford, and the chiefs of the various departments represented by the members of the Advisory Commission. Dr. Frank F. Simpson is chief of the Medical Section of the Council of National Defense.

THE ADVISORY COMMISSION.

The organization of the council and of the Advisory Commission provides that each member of the Advisory Commission shall gather about himself for the most effective co-ordination of the activities he represents, a committee or board consisting of representatives of governmental departments on the one hand, and civilian members on the other hand.

The Medical Committee, of which Dr. Franklin H. Martin is chairman, consists of

Wm. C. Gorgas, Surgeon General of the U. S. Army.

Wm. C. Braisted, Surgeon General of the U. S. Navy.

Rupert Blue, Surgeon General of the U. S. Public Health Service.

Col. Jefferson R. Kean, Director General of Military Relief of the American Red Cross.

Dr. Wm. H. Welch, member of the National Council of Research.

Dr. Wm. J. Mayo, Chairman of the Committee of American Physicians for Medical Preparedness.

Dr. Frank F. Simpson, Chief of the Medical Section of the Council of National Defense, and Secretary of the Committee of American Physicians for Medical Preparedness.

Many medical problems which have bearing upon the national defense are considered by Dr. Martin's committee and by the Advisory Commission and the Council of National Defense before being put into action by the governmental departments concerned.

COMMITTEE OF AMERICAN PHYSICIANS FOR MEDICAL PREPAREDNESS—ITS COMPONENT PARTS.

NATIONAL AND STATE COMMITTEES.

In April, 1916, the national committee was appointed by the joint action of the presidents of the American Medical Association, the American Surgical Association, the Congress of American Physicians and Surgeons, The Clinical Congress of Surgeons of North America, and the American College of Surgeons. To that committee was delegated the responsible duty of formulating plans whereby the civilian medical resources of the United States might be ascertained and effectively co-ordinated for such purposes as might be required by the Federal Government.

The national committee organized, selected a chairman and secretary and an executive committee, and appointed a state committee of nine strong men in each state of the Union.

It is the fixed policy of this committee that all presidents and secretaries of the various state medical societies shall be members of their respective state committees during their incumbency in office. From the first it was contemplated that at the proper time the organization of committees would be perfected in each county of the country. That time has now come and county committees are being rapidly organized.

In each instance the state committees are expected to select the county committees and to supervise their formation.

NAME AND PERSONNEL OF COUNTY COMMITTEES.

It is the fixed policy of the Committees of American Physicians for Medical Preparedness that the various important medical interests and activities of each county shall be represented on the county committees. This is done for the purpose of co-ordinating the important interests and activities so that the medical profession of the nation may present a compact and effective organization for the purpose of aiding effectively in the national defense. In order that this plan may be

carried out with uniformity and precision throughout the country, the various state committees have been requested to have all county committees bear the following distinguishing name, to wit, The Auxiliary Medical Defense Committee of.....County, inState. The state committees have also been requested to provide that the county committees shall include the following in their list of members :

1. All members of national committee of the Committee of American Physicians for Medical Preparedness, resident in the individual county.
2. Members of the state committee resident in or near the individual county.
3. Representatives of the U. S. Army resident in the individual county.
4. Representatives of the U. S. Navy resident in the individual county.
5. Representatives of the U. S. Public Health Service resident in the individual county.
6. Representatives of the State Board of Medical Examiners residing in the individual county.
7. Representatives of the State or City Public Health Service.
8. Ranking medical officer of the National Guard.
9. President and secretary of the local Medical Officers' Reserve Corps Association, if there should be such an organization.
10. Deans of medical schools.
11. President and secretary of the County Medical Society.
12. President and secretary of any other important medical societies.
13. Medical director of the local Red Cross Units.
14. Other representative medical men.

DUTIES OF COUNTY COMMITTEES.

From time to time specific duties will be assigned to the various state and county committees. These duties will be in accord with the policy of the Council of National Defense, and should be executed promptly and precisely by those who are called upon to co-operate in this manner with the Council of National Defense.

The committees will call to their assistance those who have been appointed field aids by their various state committees and such other physicians as they may desire to have co-operate with them.

Among the specific duties which the county committees are requested to perform at this time are the following :

First. That these committees co-operate with the national and state committees of the Committee of American Physicians for Medical Preparedness in their efforts to gain needful information regarding the civilian medical resources of their own communities, and in their efforts to co-ordinate civilian medical activities for prompt mobilization in case of need.

Second. That they secure applicants:

(a) For the Army Medical Corps. If the President should call the full complement of troops already authorized by Congress, the regular army would need about 1,200 additional medical officers. If a million men should be called, a corresponding increase would be required.

(b) For the Medical Officers' Reserve Corps. If war should come, 20,000 to 30,000 medical reserve officers should be enrolled.

(c) For the Naval Medical Corps, which needs about 350 additional officers.

(d) For the Coast Defense Reserve Corps of the Navy, several hundred high class reserve medical officers are desired.

(e) For the National Guard, such numbers as may be required to bring your local National Guard to full strength.

In the preparation for national defense the first thing needed will be medical officers. Physicians recommended for such service should be of the highest type. They should be free from suspicion of addiction to drugs or drink.

Medical Officers who go to field duty should by preference be under the age of forty-five.

Third. That they co-operate, individually and collectively, with the Medical Department of the Army, Navy and Public Health Service and with the Council of National Defense.

Fourth. That they co-operate with the Red Cross in their efforts to bring that organization to the highest point of efficiency.

COMMITTEE OF AMERICAN PHYSICIANS—ACTIVITIES ACCOMPLISHED AND IN PROGRESS.

On the 26th of April, 1916, the executive committee of the Committee of American Physicians tendered the services of the committee to the President of the United States. He expressed himself as being pleased with the patriotic tender of services and regretted that existing laws did not permit the acceptance by the Federal Government of gratuitous services, but stated that the matter would be referred to the

Secretary of War and the Secretary of the Navy for the purpose of devising plans by which the good offices of the medical profession could be accepted and utilized to best effect by the Federal Government. He further stated that the plans would be referred to the Committee of American Physicians for comments and suggestions. The executive committee was permitted to make suggestions regarding the bill creating the Council of National Defense.

During the last year this Committee and its various subsidiary bodies have been actively engaged in formulating and carrying out various activities in conformity with the general plans for national defense, which have been undertaken by the Federal Government.

The splendid work done by the various state and other committees was of such extent and value that the Council of National Defense at its first meeting requested the Committee of American Physicians to continue their various activities under the guidance of the Council of National Defense, and asked the secretary of the Committee of American Physicians to act as chief of the medical section of the Council of National Defense. Since that time the various activities have gone forward with renewed energy.

Some of the activities which have either been completed or are well under way, follow :

First. Some 20,000 medical men selected from all parts of the country have been classified according to the training and the kinds of work which they do best.

Second. An inventory of hospitals and other medical institutions is well under way.

Third. It has been the fixed policy of the Committee of American Physicians to aid the American Red Cross in bringing its medical department to the highest point of efficiency. With that object in view, and in order to foster the spirit of co-operation, the members of the national committee of the Committee of American Physicians accepted invitations to become members of the national committee of the medical department of the American Red Cross. In order further to promote the harmonious co-operation of the two organizations, most of the members of the various state committees of the Committee of American Physicians were also made members of the state committees of the American Red Cross. The various county committees will also be expected to co-operate in carrying out the plans of the two organizations.

Fourth. The establishment of military training for senior medical students in a large percentage of the high grade medical schools of the country.

Fifth. The establishment of more effective military training for hospital groups for members of the Medical Officers Reserve Corps, for dental students, and others.

Sixth. The appointment of a committee for the standardization of medical and surgical supplies and equipment. The purpose of this work is to designate a list of articles essential to the successful conduct of civilian and military medical and surgical activities, so that in the event that it should become necessary to curtail production all of the energies of the drug and instrument makers would be devoted to necessary articles rather than to those which are desirable but not essential. On this standardization committee are representatives of the Army, the Navy, the Public Health Service, the Red Cross, the Council of National Defense and a number of the most distinguished members of the various specialties of civilian medicine. In their work of co-ordination and standardization this committee will take council with the manufacturers of the various supplies under consideration.

Seventh. Much valuable information supplied by medical and other observers who have worked in the war zones of Europe is being gathered and classified.

Eighth. The presidents of important national medical organizations of the country have been requested to suggest to the medical section of the Council of National Defense the kinds of work which members of those organizations are best fitted to perform, and to suggest plans whereby their activities and resources might be utilized to best advantage. This request does not contemplate an inventory and organization of these resources. The purpose is that having received suggestions offered by the various organizations, those suggestions will be maturely considered, and such as conform to the plans of the Council of National Defense and can be utilized to advantage, will be adopted. The various organizations will, in that case, be requested to co-operate fully and promptly in perfecting the plans of the Council of National Defense.

The foregoing memorandum embodies only a very small percentage of the problems now under consideration. It is neither wise nor desirable, however, to present them in detail at this time.

Information regarding the correlated activities of the Council of National Defense and the Advisory Commission, the Medical Departments of Government and the Committee of American Physicians for Medical Preparedness.

DANGER OF FLY POISONS.

In October, 1914, and February, 1916, we published a cursory statistical report that revealed the number of cases where children had been poisoned from arsenical fly destroyers. We again present a table showing cases reported in the press and collected through the agency of a press clipping bureau this last year.

1916.	Total.	Fatal.	Recov. Doubt.	Recov. Indicat.
March	1		1	
June	1			1
July	11	5	1	5
August	16	3	1	12
September	3	2		1
October	4	2		2
	36	12	3	21

The cases occurred in the following states:

California	1
Illinois	9, 3 fatal
Indiana	1
Iowa	3
Michigan	1
Minnesota	5, 2 fatal
Montana	1, 1 fatal
Missouri	2, 1 fatal
N. Dakota	2, 2 fatal
Nebraska	3, 1 fatal
Pennsylvania	4, 1 fatal
So. Dakota	1
Vermont	1
Wisconsin	2, 1 fatal

It is interesting to note that nine of these cases, with three fatalities, occurred in Illinois and only one case in Michigan. A bill introduced in the Illinois legislature to prohibit the sale of poisonous fly-papers was *defeated*. A similar bill was *passed* by the Michigan Legislature. Illinois paid as tribute for the neglect of her legislators to safeguard children, three infant lives and the suffering of six others. This example is a forceful one, in our opinion, and is self pleading for the abolition of this peril.

The United States Public Health Service has taken cognizance of

the dangers of poisonous fly papers. The following is extracted from supplement No. 29 of the Public Health Reports:

"Of other fly poisons mention should be made, merely for the purpose of condemnation, of those composed of arsenic. Fatal cases of the poisoning of children through the use of such compounds are far too frequent, and owing to the resemblance of arsenical poisoning to summer diarrhea and cholera infantum, it is believed that the cases reported do not by any means comprise the total. Arsenical fly-destroying devices must therefore be rated as extremely dangerous and should never be used, even if other measures are not at hand."

There seems to be no sufficient reason for permitting the unrestricted sale of arsenical fly destroyers and it would be well if other states followed the lead of Michigan in this and regulated their sale. On request we will be pleased to send to anyone interested a copy of the Michigan law.

The profession must need actively to exercise its educational influence to abolish this evil.

NEW AND NON-OFFICIAL REMEDIES.

TABLETS SODIUM CHLORIDE AND CITRATE, Squibb (Dr. Martin H. Fischer).—Each tablet contains sodium chloride 1 Gm. and sodium citrate 2 Gm., E. R. Squibb and Sons, New York.

OPTOCHIN. (Ethyl-hydrocupreine).—A synthetic alkaloid closely related to quinine. It has the antimalarial and anesthetic action of quinine, but toxic symptoms, such as tinnitus, deafness, amblyopia or amaurosis (retinitis) are more liable to occur than with quinine. Investigations indicate that the drug may be of value in the treatment of lobar pneumonia, when its safe dosage has been determined. Reports indicate that the drug is of decided value in the treatment of pneumococcic infection of the eye (ulcus corneae serpens). Optochin is insoluble in water, but may be used in 1 to 2 per cent. solution in a bland fatty oil or as an ointment Merck and Co., New York.

OPTOCHIN HYDROCHLORIDE (Ethyl-hydrocupreine hydrochloride).—The hydrochloride of optochin (see above). It has the therapeutic

properties of optochin, but is soluble in water. For application to the eye and instillation into the conjunctival sac a freshly prepared 1 to 2 per cent. solution in water is used. Merck and Co., New York. (Jour. A. M. A., March 3, 1917, p. 713.)

NON-PROPRIETARY ARTICLES.

Ferric Cacodylate.

H. K. Mulford Company:

Iron Cacodylate Ampules, 0.03 Gm., Mulford.

E. R. Squibb and Sons:

Ampoules Iron Cacodylate, 0.03 Gm., Squibb.

STATE PROGRAM.

WEDNESDAY, JUNE 13.

9.00 A. M.

Call to Order by the President,

W. F. HART, Camden

Invocation.

Introduction of Visiting Delegates.

"The Transmission of Heart Murmurs,"

C. C. HALL, Dover

(Subject to be announced)

F. N. WHITTIER, Brunswick

AFTERNOON SESSION.

2.00 P. M. SHARP.

President's Address,

W. F. HART, Camden

"Recent Legislation in Relation to Medicine."

8.00 P. M.

THE ANNUAL BANQUET.

Speaker to be chosen.

THURSDAY, JUNE 14.

9.00 A. M.

"Diagnosis, Etc., of Anterior Poliomyelitis," FRANCIS W. PEABODY

"Treatment, Etc., of Anterior Polio,"

FRANK R. OBER

Discussion opened by Allan Woodcock

AFTERNOON SESSION.

2.00 P. M.

Report of Committee on Necrology,

J. A. SPALDING, Portland

Report of House of Delegates.

Report of Council.

Election of President.

ANNUAL ORATION.

Speaker to be chosen.

Those wishing to submit voluntary papers should immediately consult some member of the Program Committee.

LESTER ADAMS, Bangor.

S. J. BEACH, Augusta.

A. L. JONES, Old Orchard.

JOURNAL OF MAINE MEDICAL ASSOCIATION

Editorial Staff.

DR. FRANK Y. GILBERT, MANAGING EDITOR.

DR. C. R. BURR, Portland.

DR. J. A. SPALDING, Portland.

DR. H. E. MILLIKEN, Portland.

DR. CARL M. ROBINSON, Portland.

County Editors.

DR. S. E. SAWYER, Lewiston.

DR. D. M. STEWART, South Paris.

DR. W. G. CHAMBERLAIN, Ft. Fairfield.

DR. H. J. MILLIKEN, Bangor.

DR. HAROLD J. EVERETT, Portland.

DR. C. C. HALL, Foxcroft.

DR. G. L. PRATT, Farmington.

DR. R. C. HANNEGAN, Bath.

DR. A. L. JONES, Old Orchard.

DR. H. W. SMITH, Norridgewock.

DR. S. J. BEACH, Augusta.

DR. G. A. NEAL, Southwest Harbor.

DR. F. H. WEBSTER, Rockland.

Editorial Comment.***Medical Preparedness.***

Some few inquiries are coming to this office from physicians desirous of enlisting, also inquiries from different departments of the army and navy concerning probable candidates for enlistments. Never before in the history of the country has there been such an opportunity for the medical profession to do a great work. We point with pride to vaccination in small-pox; antitoxin for diphtheria, typhoid, anthrax, etc., which represents relief from untold suffering.

We turn to the Panama Canal Zone, which is to-day the healthiest spot on earth and made so by medical men; we find that the massing of our National Guards on the Mexican frontier was accomplished with very small amount of sickness, all due to medical men, and now our country must mobilize an army larger than ever before contemplated and is calling for physicians, not to fight the battle of right or might, but to fight the battle with disease.

The army or navy medical officer must be an expert on sanitation. His first big duty is to protect our men from infectious diseases and make camp life a healthy existence. A soldier's duty in time of war is sufficiently hard without subjecting him to unhealthy surroundings. This is one of the big duties and privileges of the physicians.

At the meeting on "Medical Preparedness" held in Portland, Friday, April 13th, over 200 physicians from all parts of the state discussed this question freely and many enlistments will naturally follow.

The young single men under 32 should seriously consider the question of immediately enlisting in the regular service, while those

over 32 years can enlist in the Reserve Corps. Those whose age or infirmities compel them to remain out of active duty can serve their country by taking over the practice of the younger men who are willing to serve, with the understanding that, on the young physician's return, his practice will be restored to him. Some of the older lawyers of Portland have volunteered to take over the practice of any of the younger lawyers who enlist, and not only return their practice, but all money collected from it during the period of enlistment. Every physician with red blood should take some part. What is yours to be?

National Board of Medical Examiners.

The second examination to be given by the National Board of Medical Examiners will be held in Washington, D. C., June 13, 1917. The examination will last about one week.

The following states will recognize the certificate of the National Board: Colorado, Delaware, Idaho, Iowa, Kentucky, Maryland, New Hampshire, North Carolina, North Dakota and Pennsylvania. Favorable legislation is now pending in twelve of the remaining states.

A successful applicant may enter the reserve corps of either the army or navy without further professional examination, if their examination papers are satisfactory to a Board of Examiners of these services.

The certificate of the National Board will be accepted as qualification for admittance into the Graduate School of the University of Minnesota, including the Mayo Foundation.

Application blanks and further information may be obtained from the Secretary, Dr. J. S. Rodman, 2106 Walnut St., Philadelphia.

COMING MEETINGS.

American Medical Association, New York, June 4-8.

American Proctologic Society, New York, June 4-5.

Alienists and Neurologists, Chicago, July 10-12.

Clinical Congress of North America, Chicago, the week of October 22d.

Commercial Notes.

The nutritive value of oatmeal, as compared with that of wheat flour, has been firmly established and for thousands of years the oat has been the advocated food. It contains a higher percentage of albuminoids than any other grain, viz., 12.6—that of wheat flour being 10.8—and less percentage of starch, 58.4, as against 66.3 in wheat. It has rather more sugar, viz., 5.4—wheat flour having 4.2—and nearly three times the amount of fat, 5.6, as against 2.0 in flour. Salts amount to 3.0 per cent. in oats, but are only 1.7 in wheat.

The rolled oats marketed by The Quaker Oats Company, of Chicago, are worthy of particular note, as only selected, plump oats are used, one bushel of grain yielding but ten pounds for the finishing process.

DAKIN'S NEW ANTISEPTIC IS MAKING FRIENDS.

We hear good reports of Chlorazene, which is evidently making friends in the profession. Chlorazene is chemically paratoluene-sodium-sulphochloramide, in other words, it is a synthetic coal-tar antiseptic and germicide, derived from toluol. It was introduced to the profession by Dr. H. D. Dakin, whose work with the hypochlorites, in association with Dr. Carrel, has made his name familiar to every physician.

Chlorazene carries chlorine in a stable form. It is said to be practically non-toxic and non-caustic, and to keep almost indefinitely. It is available in tablet form as well as in powder, so that solutions can be made on short notice in any emergency presenting. The tablets are particularly convenient.

This preparation, in addition to its use as a general antiseptic in the treatment of infected wounds according to the Carrel method, is also employed as a douche following labor or in uterine infections, as an irrigant in gonorrhea, as a local application in eczema and skin ulcers, in the treatment of sinuses and fistulæ, as well as in the treatment of diseases of the nose and throat. Used as a gargle or spray, in 1-4 per cent. solution, it has proven very effective in sore throats of all kinds, more effective than other germicides with which we are familiar.

Chlorazene is an interesting chemical, and The Abbott Laboratories deserve great credit for putting it on the market.

Notices.

Army Medical Corps Examinations.

The Surgeon General of the Army announces that preliminary examinations for appointment of first lieutenants in the Army Medical Corps will be held at convenient points the first Monday in each month. Full information concerning these examinations can be procured upon application to the "Surgeon General, U. S. Army, Washington, D. C."

The essential requirements to secure an invitation are that the applicant shall be a citizen of the United States, shall be between 22 and 32 years of age at the time of commission at the close of the Army Medical School, a graduate of a medical school legally authorized to confer the degree of Doctor of Medicine, shall be of good moral character and habits, and shall have had at least one year's hospital training as interne after graduation.

Graduate physicians who are serving their internship and who meet the other requirements can be examined for appointment with the understanding that they will complete the required postgraduate hospital internship before coming to the Army Medical School.

Those who qualify at their preliminary examination and complete their hospital internship by July first will be ordered to the Army Medical School for the special session of the school commencing July ninth. The regular session of the school will open on October first.

In order to perfect all arrangements for the examination, applications should be completed at the earliest practicable date.

There are at present 230 vacancies in the Army Medical Corps.

After July first, there will be 222 additional vacancies.

County News and Notes.

ANDROSCOGGIN.

ANDROSCOGGIN COUNTY MEDICAL SOCIETY.

The Androscoggin County Medical Society held their regular monthly meeting April 3, 1917, in Lewiston Municipal Court rooms.

Doctors R. N. Randall, C. J. Fernald, Alton Grant and R. H. Clark were elected members of the society.

Dr. B. L. Bryant, of Bangor, gave an extremely practical paper on "Chronic Lesions of the Stomach," citing many cases and illustrating them by X-ray photos. His paper was decidedly good and his photos were almost marvels.

Altogether the evening was a success.

L. F. HALL, *Secretary.*

YORK.

YORK COUNTY DAUGHTERS OF HYGIEIA.

The 14th quarterly meeting of the York County Daughters of Hygieia was held at the Springvale House, Springvale, April 5th. Those present were: Mrs. W. W. Smith, Ogunquit; Mrs. S. B. Marshall, Alfred; Mrs. C. E. Lander, Alfred; Mrs. R. L. Maybury, Saco; Mrs. C. E. Thompson, Saco; Mrs. A. S. Davis, Springvale; Mrs. C. E. Cook, South Berwick; Mrs. J. A. Randall and Mrs. A. L. Jones, Old Orchard.

The meeting was called to order by the president, Mrs. W. W. Smith, and a live business meeting followed. The president appointed the following committees:

Sick committee, Mrs. C. E. Lander, Mrs. H. I. Durgin, Mrs. C. F. Kendall, Mrs. F. W. Smith, Mrs. L. H. Brown, Mrs. D. W. Wentworth, Mrs. P. H. Abbott, Mrs. J. A. Randall.

Membership committee, Mrs. S. B. Marshall, Mrs. R. L. Maybury, Mrs. E. D. O'Neill, Mrs. L. L. Powell, Mrs. C. E. Thompson, Mrs. B. F. Wentworth, Mrs. J. L. M. Willis.

Lookout committee, Mrs. A. L. Jones, Mrs. A. S. Davis, Mrs. A. C. Maynard.

It was voted that a committee, consisting of Mrs. W. W. Smith, chairman, Mrs. D. E. Dolloff and Mrs. R. L. Maybury, be appointed as the committee on by-laws.

The program was very interesting and instructive and was as follows: A letter from Mrs. F. C. Lord, telling a little about her New York trip, was read; "The History of Anesthesia," by Mrs. C. E. Thompson; "Women and Preparedness," by Mrs. C. E. Cook; "The High Cost of Living," by Mrs. F. W. Smith.

A splendid dinner was served at the Springvale House. Later some of the ladies went through the Nasson Institute building and others called on friends. It was in all a very pleasant day.

Dakin's New Antiseptic CHLORAZENE



This new chlorine-carrying synthetic antiseptic, paratoluene-sodium-sulphochloramide, was developed in France and England by Dr. H. D. Dakin of the Rockefeller Institute and has been tested clinically, with fine results, in the war hospitals of France and England. Many encouraging reports from prominent surgeons in this country are being received daily.

YOU SHOULD USE IT BECAUSE

CHLORAZENE is a definite chemical compound.
CHLORAZENE is less irritant than the hypochlorites.
CHLORAZENE is a most powerful antiseptic.
CHLORAZENE is virtually noncaustic and nontoxic.
CHLORAZENE is stable.
CHLORAZENE does not coagulate the albumens of the tissues.
CHLORAZENE is supplied in convenient form: tablets and powder.

CHLORAZENE is being used in treating infected wounds received in modern warfare, and many physicians in civil practice report success in the use of Chlorazene in infections, including those of the mucous lined cavities and for burns, ulcers and skin lesions.

PACKAGES AND PRICES

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PORTLAND MEDICAL CLUB.

The regular monthly meeting of the Portland Medical Club was held at the Columbia Hotel, March 1, 1917. Dr. Philip P. Thompson presided. Eighteen members were present.

Dr. Gilbert reported a case of optic neuritis, due to the continued drinking of Coca-Cola, of which the essential ingredient is caffeine.

Dr. M. C. Webber reported a case of hysteria following an operation for appendicitis.

Dr. Philip Thompson spoke of ambrine in the treatment of burns and of the Dakin-Carrell solution in the treatment of septic wounds. Both are used with success in several Philadelphia hospitals. In military surgery the Dakin-Carrel solution has given remarkable results.

Dr. Welsh, speaking in regard to the tuberculosis situation, said that the City Government had voted an appropriation of \$1,000 for an isolation hospital, but would not appropriate anything for maintenance.

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Dr. J. H. Harris read a communication from the Navy Department in regard to the Naval Medical Reserve. The doctor would like to get in touch with a few young physicians who might consider enrollment.

Dr. Gilbert spoke of the status of the osteopathic bill. He strongly advocates that one osteopath be placed on the Board of Registration so that there may be a common standard of examination for all practitioners.

Dr. R. F. Chase read an interesting paper entitled, "The Treatment of the Played-Out Woman." It dealt with visceroptosis. The conclusions were as follows:

1. That visceral prolapse of sufficient degree to be of clinical significance is not so common as generally believed.
2. That the condition can generally be overcome or alleviated by medical measures and that surgery is but rarely indicated.
3. That constipation can usually be cured and by medical measures.
4. That abdominal support cannot be obtained in certain cases.
5. That in treating these cases our attention must be directed to all of the accompanying physical and mental ills, and that the ptosis itself is often of secondary consideration, but



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Following is an extract from "The Transmission of Disease by Flies," Supplement No. 29 to the Public Health Reports, April, 1916:

"Of other fly poisons mention should be made, merely for the purpose of condemnation, of those composed of arsenic. Fatal cases of the poisoning of children through the use of such compounds are far too frequent, and owing to the resemblance of arsenical poisoning to summer diarrhea and cholera infantum, it is believed that the cases reported do not, by any means, comprise the total. Arsenical fly destroying devices must therefore be rated as extremely dangerous, and should never be used, even if other measures are not at hand."

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in the mind of the patient has become of great importance merely from the knowledge that such a condition is present.

H. M. SWIFT, *Secretary*.

The regular monthly meeting of the Portland Medical Club was held at the Columbia Hotel April 5, 1917. Dr. Philip P. Thompson presided. Twenty-five members were present.

Dr. Louis L. Hills, of Westbrook, was elected to membership.

Dr. A. S. Thayer announced a series of lectures on "Military Medicine" to be given in the Council Chamber of the City Building beginning April 6th. This course is intended primarily for third and fourth year medical students, but all physicians interested are invited.

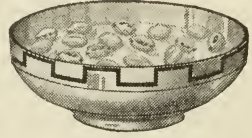
Dr. C. N. Peters read an interesting and instructive paper entitled "Acute Unilateral Kidney Infection of Hematogenous Origin." This condition is usually secondary to infectious processes elsewhere, as furuncles, abscesses, and especially diseased tonsils. Its presence is to be suspected from the occurrence of constitutional symptoms associated with costo-vertebral tenderness. The diagnosis is to be confirmed by a comparison of the urine of the two kidneys separately obtained by ureteral catheterization. Bladder urine findings, if negative, should be disregarded. Treatment may be operative or palliative according to the indications of the individual case. Palliative treatment consists in rest, elimination, heat to the affected region, and the ingestion of hexamethaline combined with acid sodium phosphate. A series of five cases was reported.

An interesting discussion followed the reading of the paper.

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Personal News and Notes.

Dr. Elmer J. Morrison went to Portsmouth a few days ago to take the examinations for surgeon in the United States Navy and expects to be assigned to service in some capacity at once. Dr. Morrison, however, expects, according to advice given him while there, to be assigned to Bar Harbor, to assist in the recruiting there at the naval headquarters recently opened.

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Dr. J. G. Towne, of Waterville, gave a very interesting address to Elm City Troop of Boy Scouts at their headquarters at the Methodist church Monday evening at their regular meeting. The doctor is a very pleasing speaker and his talks are thoroughly enjoyed by the boys.

Dr. W. L. Hunt, of Bangor, has been to Philadelphia to visit his son, Commander Walter M. Hunt, of the United States Navy.

Dr. A. B. Libby, of Smyrna Mills, is at the Aroostook Hospital receiving medical treatment.

Dr. E. P. Fish, of Waterville, has recently purchased the home of Dr. S. A. Cobb and is having it remodeled to occupy.

Dr. and Mrs. W. G. Sawyer, of Madison, have returned home after a visit with their son Leslie, of Lebanon, N. H.

Dr. Henry, of Lincoln, of the medical department of the United States Army, has been detailed to deliver a series of lectures on military medicine, camp sanitation, etc., to the third and fourth classes of the Bowdoin Medical School. The first of these lectures was given in the common council chamber, Portland, on April 6th.

Assistant Surgeon Grattan George Irwin, U. S. Naval Reserve Force, reported for duty at the Bangor sub-station, 208 Exchange St., April 1st. Dr. Irwin was transferred from the central recruiting station in Portland, where for the past few days he has been undergoing a course of training and instruction in the duties devolving upon an examining surgeon while on recruiting service, under the direction of Assistant Surgeon J. H. Harris, U. S. Navy medical officer, U. S. Navy recruiting station, Portland.



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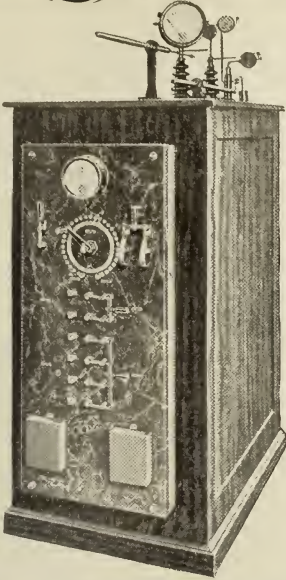
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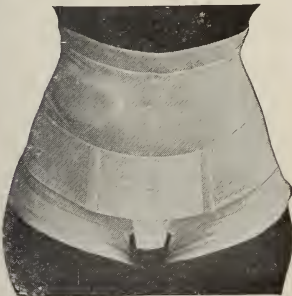
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THE JOURNAL



Maine Medical Association.

The Official Organ of the State and County Medical Societies.

VOL. VII, No. 10

MAY, 1917.

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TABLE OF CONTENTS

Original Articles—

Fractures of the Spine.....	307
Necrology	319
Medical War Notes.....	322

Editorial Comment—

Medical Defense Against Malpractice	
Suits.....	326

Miscellaneous—

Members of the Maine Medical Association	327
Medical Notes.....	333
County News and Notes.....	335
Personal News and Notes.....	VIII

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VOL. VII.

MAY, 1917.

No. 10

FRACTURES OF THE SPINE.

By E. G. ABBOTT, M. D., F. A. C. S., Portland, Maine.

Fractures of the spine are not infrequent and in many instances they are unrecognized. In many cases where the symptoms are not definite an incorrect diagnosis is made and the patients are often treated for arthritis, traumatic neurosis, neuritis or muscle strain. In looking over the literature on this subject the following fallacious statements are found: Fractures of the spinal column are uncommon; they are usually fatal; the symptoms are invariably sudden in their onset and are so marked that a diagnosis may be made at once by a physical examination. Further, if fracture is present, this physical examination should show deformity, paralysis of sensation and motion, crepitus and severe pain, and the prognosis given is either sudden death or a prolonged sickness with a fatal termination. If a careful survey of what has been written on the subject is made, with the exception of the literature from a few recent authors, the conclusion is drawn that unless the foregoing symptom-complex is present in any case, either in part or in whole, there cannot be a fracture, but simply a strain. By some writers a fatal prognosis is given in most instances, and recovery is so rare that in those cases in which it does occur the initial diagnosis is thought to be in doubt.

These statements, when applied to a small percentage of fractures of the spine, are correct, but clinical experience shows that in a large number of such accidents none of the foregoing symptoms are present and the results are quite different from those given. Comparatively speaking, it is only in a few cases of fracture of the spine that the cord is injured at the time of accident. A clear conception of the difference

between fractures with primary injury to the cord and those without is imperative in order to make a correct diagnosis and to apply effective treatment. In most instances there is apparently no serious damage to any of the structures at the time of accident and a history is obtained of a slight blow or sudden movement with very little initial disturbance. Many of such cases recover without assistance, and the true condition is revealed later, perhaps, by a skiagraph taken for some other purpose years after complete recovery. There are, however, a considerable number of cases in which, although the primary symptoms were slight, secondary symptoms develop which cause the patients to apply for treatment. Even then the nature of the condition is frequently unrecognized and the patients receive little attention. It is not uncommon for these cases to come to clinics with complaints of a vague nature and to find, when, as a matter of routine, a skiagram of the spine is taken, a fracture of the vertebræ.

This paper, which is only a preliminary one, is not written with the intention of considering the subject of fractures of the spine in its entirety, but for the purpose of presenting a series of cases of fractures of the spine in which there was unmistakable and extensive partial destruction of the bodies of the vertebræ with such slight initial symptoms that the actual condition was not determined until months after the injury, when secondary symptoms compelled the patient to seek relief. Cases in which the cord was injured at the time of accident, those in which parts of the vertebræ other than the body were fractured, and those in which the destruction was so slight that nature unaided effected a cure, are purposely excluded.

In this class of fractures of the spine, namely, fractures in which secondary symptoms alone call attention to the gravity of the condition, the symptoms, other than those present immediately following the injury—such as are found in any simple sprain—are late in their appearance, gradual in their onset and vague. When the series here illustrated are considered as a whole, the secondary symptoms present at the examination made months after the injury were weakness, muscular spasm, pain, and sometimes slight deformity. These symptoms, however, were not constant; in fact, they were not all found in any one case.

In fractures of this nature the bodies of the vertebræ are the seat of the lesion, and, as they are the chief supportive structure of the spinal column, when they are injured the spine bends forward or sideways and presses on the cord or nerves. This pressure on the nerve structures is not usually present until some time after the injury and develops slowly from a gradual settling together of the parts injured.

The first symptoms apparent are usually pain and weakness. The pain is not often constant, and is caused by the assumption of certain postures which increase the pressure upon the nerves. It is not usually confined to any particular nerve or group of nerves and may be located at any point over the course of the nerve trunks which have an origin or exit near the seat of injury. Pain in these cases may be intermittent and there is no sensitiveness of the parts at the seat of injury. In cervical fractures it is most often found confined to the deltoid region and the posterior occiput but may extend down the arms to the hand. It is due to pressure around the cervical nerve roots and the position of the head frequently affects the intensity of it. In some cases it is very slight and so transitory that it seems hardly worth considering as an important symptom. In the thoracic region the pain is in the costal nerves and is never severe except when the parts are moved suddenly. This symptom is seldom present in fractures involving the lumbar spine.

Weakness is frequently a prominent symptom and the change from the stooped position to the erect, or vice versa, is not easily accomplished. This weakness is more marked in fractures involving the lower part of the spine and becomes less so in lesions higher up. In some cervical fractures, however, it is impossible to maintain the head in the erect position for long periods. Weakness first manifests itself by inability to use the limbs as well as before the injury, or by loss of strength when attempting to lift heavy bodies.

Muscular spasm in most instances may be found if a careful examination is made, and any sudden motion shows immediate contraction of the muscles controlling the region of the spine in which the fracture is located.

Deformity, which is almost always a later symptom, may be easily mistaken for an irregularity of a spinous process in an otherwise normal spine. In many cases bone deformity does not appear at all and in most cervical fractures there is none. The character of the deformity when present varies from a sharp bend to a long curve involving several vertebræ. Fractures of the bodies of the cervical spine may cause the posterior concave curve to become convex, and the head may be pulled to one side and flexed. Thoracic fractures cause slight deformity, usually a small projection of one of the spinous processes and without other symptoms might easily be passed over. The only appreciable deformity found in the lumbar spine is a lateral curving with a slight flexion.

These symptoms, namely, weakness, muscular spasm, pain and deformity, as already stated, are late in appearing and are due ap-

parently to a settling together of the vertebræ at the point injured. Motor or sensory paralysis is seldom seen, but may be present in remote parts, such as the fingers or the toes.

Fractures of the spine with few if any primary symptoms at the time of injury, but developing months later secondary symptoms which lead to a discovery of the true condition, are most frequently due to sudden flexion of the spine, and the history of the injury is often so clear upon this point that it may be considered positive. In some cases the patient has received a blow upon the head by some heavy object which causes sudden forward bending of the cervical spine. In others there is a history of a fall of some distance with the patient striking on the feet. In a few the patient catches the foot or stumbles suddenly, flexing the spine. In a general way these cases resemble very closely tuberculosis of the spine and without a complete history, including an injury and a careful physical examination, it is impossible to make a differential diagnosis. In fact, without skiagrams of the spine any diagnosis could be nothing more than tentative. The X-ray has made it possible to determine positively the exact condition in these fractures, but the position in which the patient must be placed when the skiagram is taken is of importance for the following reason: A skiagram may be taken with the patient in a certain position, which shows the parts in normal place without any apparent injury to the bones; a different view, however, *i. e.*, with the position of the patient changed, may show the same spine crushed. This point is of particular importance, for frequently an antero-posterior skiagram, especially in the cervical spine (Fig. 1), shows the vertebræ uninjured and in normal positions, while a lateral view (Fig. 2) reveals extensive fracture.

The illustrations shown here are photographs of tracings taken from skiagrams of patients with fracture of the spine, and are used in place of prints from the negatives, for the sake of clearness in details. They include fractures of the different regions of the spine and may be considered typical in character. The primary symptoms in all of these cases were so slight that in none was fracture at the time of injury suspected. The history obtained was invariably as follows: Some weeks or months previous to the examination the patient had received a slight injury by slipping, falling or by being struck by some object which bent him suddenly forward. The expressions elicited from the patients by the interrogator were, "It was only a little shaking up," and "I was somewhat lame and sore for a few days." In most instances there was no medical attendance and the patients resumed their occupation in a short time, some of them immediately. Many,

however, "took a day or two off." In none of the cases were there any symptoms, except perhaps slight muscular weakness after immediate recovery from the injury, for weeks or months, and then only a slight stiffness in some of the parts below the seat of fracture, with occasional pain, which was usually attributed to a "rheumatic attack." In a few of them there was slight deformity present at the time of examination, but in none had it been discovered by the patient.

No attempt can be made in a presentation of this nature to report all of the cases in detail, but the history of a few of them will serve to illustrate the condition found, and the reader is referred to the cuts, which show the variety of fracture frequently met with.

CASE I. Man aged 72. Applied to the clinic at The Children's Hospital for relief from a slight pain over the left deltoid muscle, which had been present at times for about a month. Some four months previous to this date he had fallen backwards, striking his head on the ground; had suffered scarcely any inconvenience from the accident and resumed his work immediately. The physical examination showed patient's general condition excellent—a bright, alert man whose age was apparently not over sixty-five years; able to walk and attend to his usual work; no limitation of joint motion in any region, except slight stiffness of neck, which was scarcely perceptible; motion and sensation normal; reflexes normal; arteries somewhat thickened. An exhaustive examination of the left shoulder showed parts normal with the exception of slight pain confined to the deltoid region. Shoulders were somewhat stooped and pressure over the spinous processes caused no pain. Spinal motion was limited, but no deformity could be found. The patient stated that he had been a "little stiff for years." A diagnosis was made of arthritis of the spine due to injury, accompanied by the usual spinal stiffness found in hard-working men of his age, and he was referred to the gymnasium rooms for massage and exercises. It was suggested by one of the examiners that, as a matter of routine, an X-ray be taken of the cervical spine and the result is shown in Figs. 1 and 2. Particular attention is called again to the two skiagrams. In Fig. 1, an antero-posterior view, the spine is apparently normal, but in Fig. 2, a lateral view, the body of the third cervical vertebra is crushed and partially dislocated. That it is possible to have most destructive damage of the cervical spine without injury to the cord or any of the so-called "classical symptoms" of fracture present is here demonstrable.

CASE II. Man aged 19. Applied to the clinic at The Children's Hospital for relief from deformity of the neck, which had gradually developed months after an accident. The history of the injury as re-

lated by the patient is as follows: Was driving a loaded team when he fell from the wagon, catching his neck between the spokes of the wheel. The wheel turned for some distance before the horses stopped, and his neck received a severe twist before he could disengage his head. He immediately resumed his seat and continued his work. The following day was rather "sore and stiff, and rested." Remained idle but a short time. When examined some five months after the accident his one and only complaint was deformity of the neck, which had been very gradual in its development and did not appear for some months after the injury. The physical examination showed no disability whatever except a slight muscular weakness, some pain when head was turned, and marked deformity of the cervical spine. The head was pulled forward and turned to one side into the position of wry-neck; motion was limited and painful. A skiagram was taken which showed fracture of the bodies of the third, fourth and fifth cervical vertebrae (Fig. 3). This patient was examined four years after leaving the clinic, and, as he stepped from his team which he was driving, he was questioned as to how he was getting on, and the reply was, "First rate, but when I move sudden seems so I can still hear them bones grate."

CASE III. Man aged 45, laborer. Was thrown from a car six months before the examination, and landed on his feet. Was bent forward and his head struck the ground. Did not suffer much of any inconvenience from the fall and resumed his work. Some three months ago noticed that in bending his back felt stiff and lame. After a little there seemed to be some loss of power in lower limbs but no pain. No other trouble. The physical examination showed a well-built, muscular man, slightly stooped; spinal motion somewhat limited, and a very slight prominence at the ninth thoracic spinous process; no paralysis of motion or sensation; reflexes normal; no other symptoms. A skiagram was taken which showed fracture of the body of the ninth thoracic vertebra (Fig. 10).

CASE IV. Man aged 55, laborer. Fell from a ladder striking on feet four months previous to the examination. Was unable to resume work for three weeks and during this time remained in bed on account of soreness and pain in the lumbar region. Made a complete recovery with the exception of perhaps some weakness in the lower limbs. Resumed work and was able to do as much as before the injury for a time. About six weeks before the examination, commenced to have trouble with his back. No pain, but more or less stiffness, which had gradually increased until it was with difficulty that he could raise himself from the stooped position. Physical examination showed the general condition good; no paralysis; reflexes normal; intense muscular spasm in the

lumbar region: no deformity and no pain. A probable diagnosis of Pott's disease was made. The skiagram, however, showed extensive fracture and dislocation of the third lumbar vertebra (Fig. 16). Figures 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 17, 18 and 19 show, in addition to those already mentioned, the skiagraphic findings in typical fractures of the cervical, thoracic and lumbar spine.

Fractures of the spine with extensive destruction and dislocation of the vertebræ are common and are frequently unrecognized. The primary symptoms, as an aid to diagnosis, are unimportant and apparently complete recovery is the usual result. Later, secondary symptoms may appear and the disability causes the patient to apply for relief. These secondary symptoms are vague, not constant and without a history of injury are most misleading. A positive diagnosis is possible only by X-rays of the spine, and the position of the patient when the skiagram is taken is often of great importance.

NOTE.--Description of cuts on page 318.

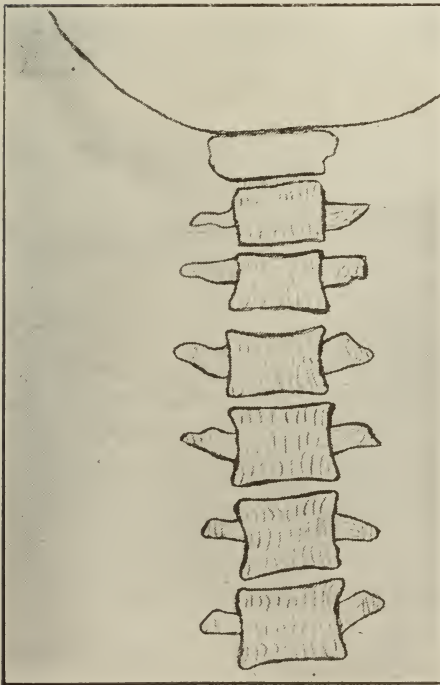


Fig. 1

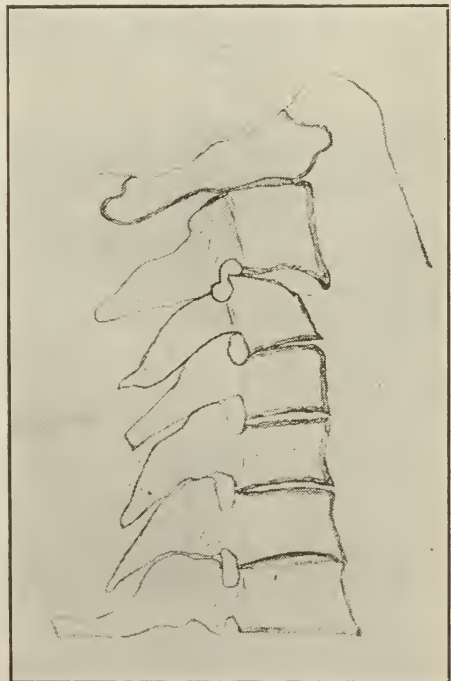


Fig. 2



Fig. 3

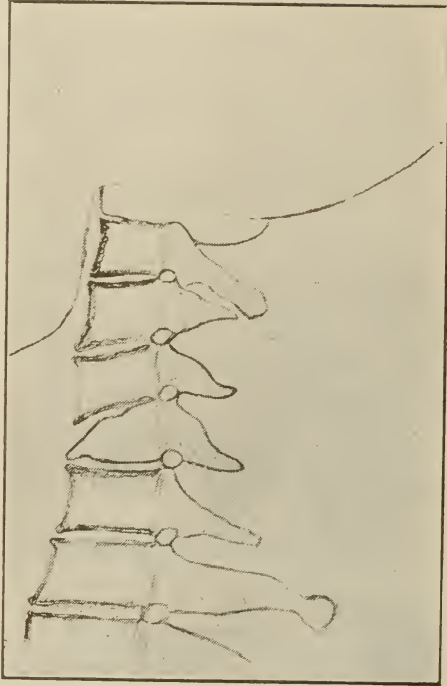


Fig. 4

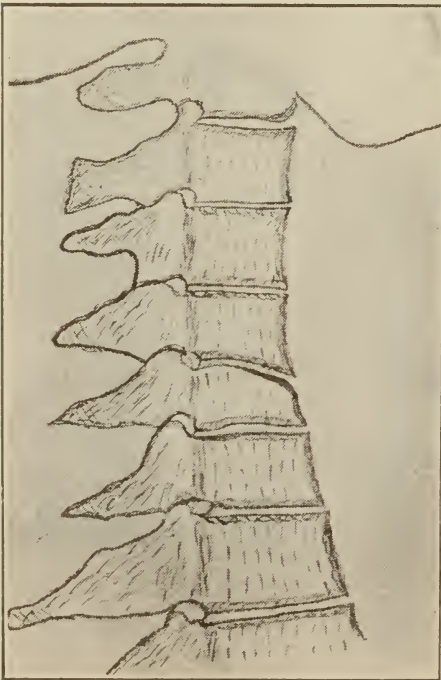


Fig. 5

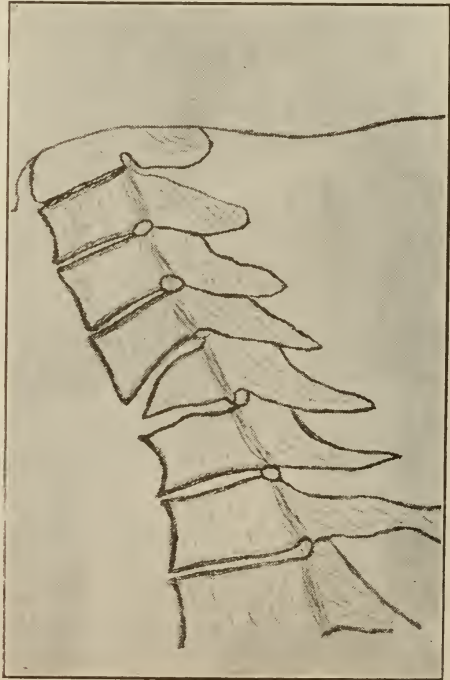


Fig. 6

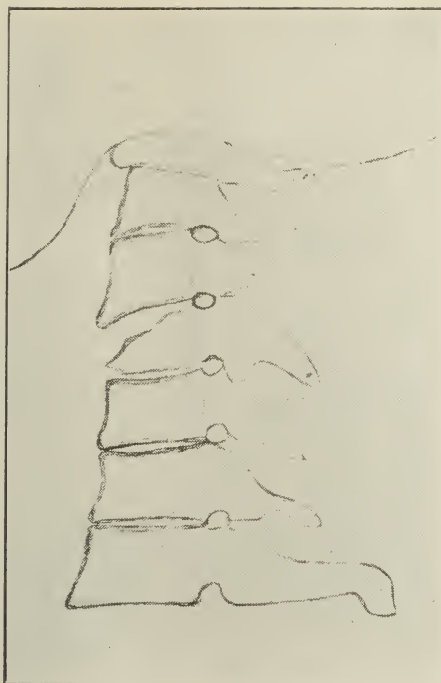


Fig. 7

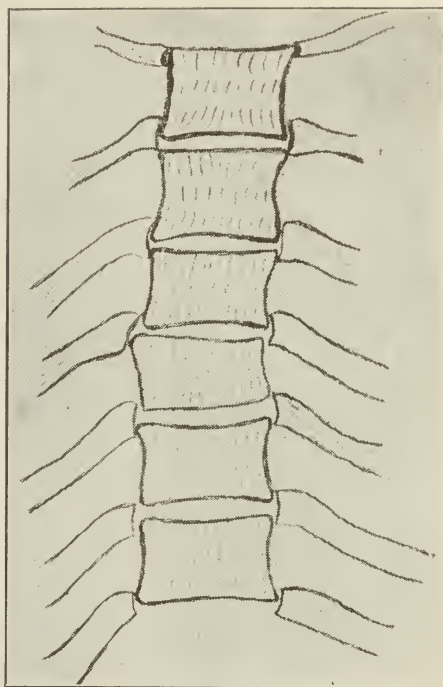


Fig. 8

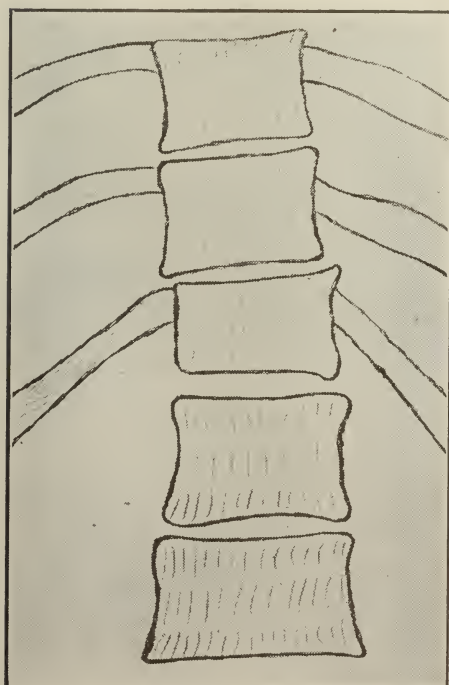


Fig. 9

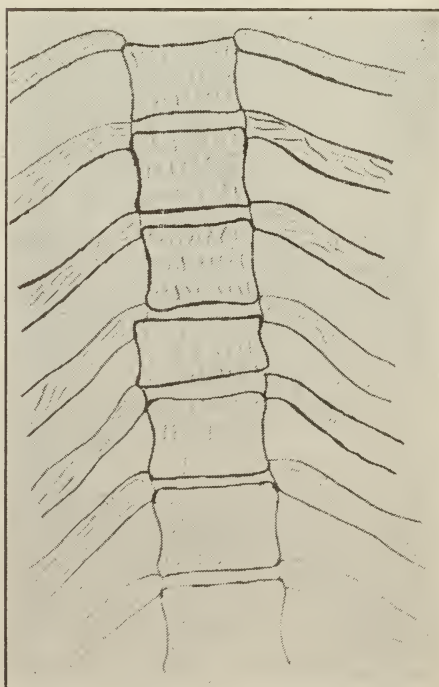


Fig. 10

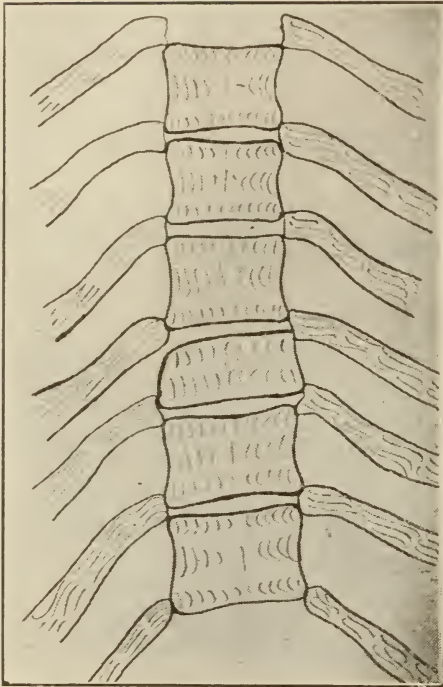


Fig. 11

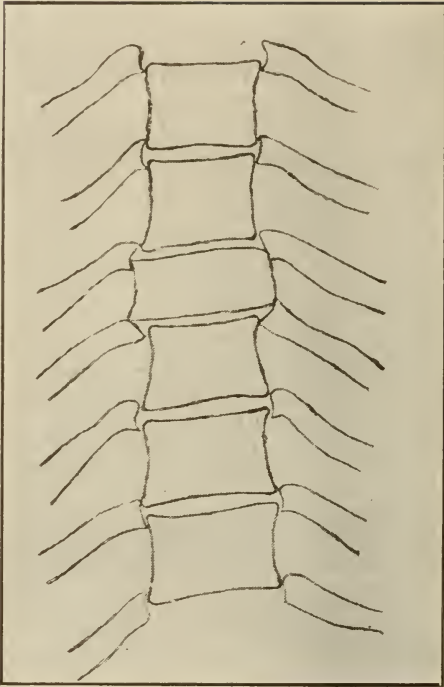


Fig. 12

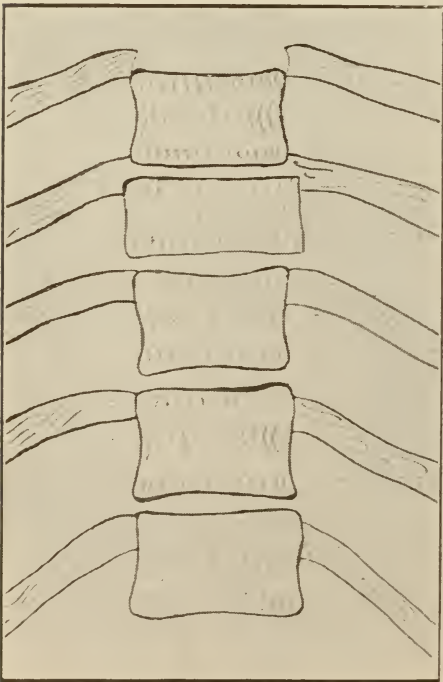


Fig. 13

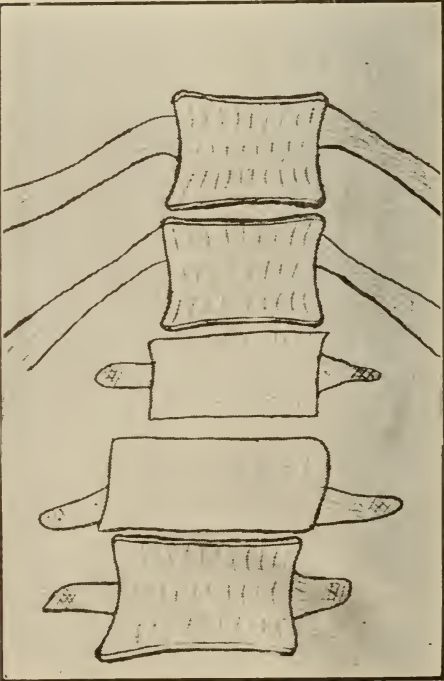


Fig. 14

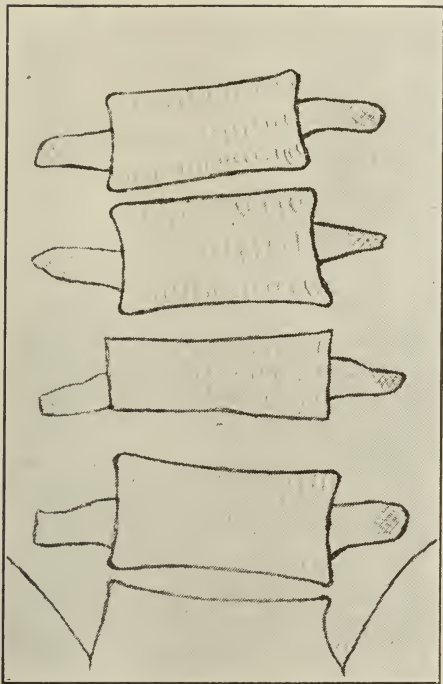


Fig. 15

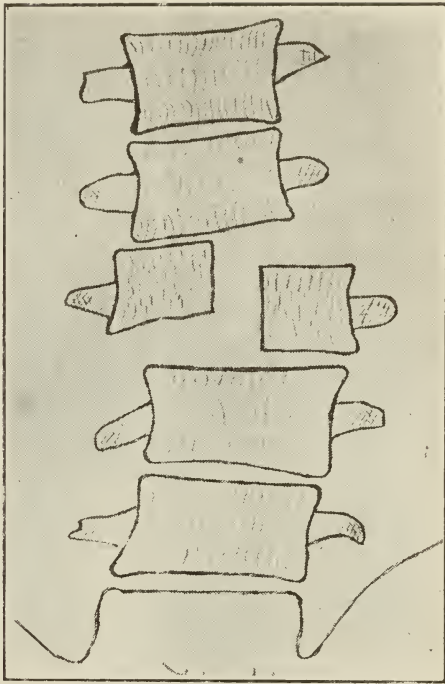


Fig. 16

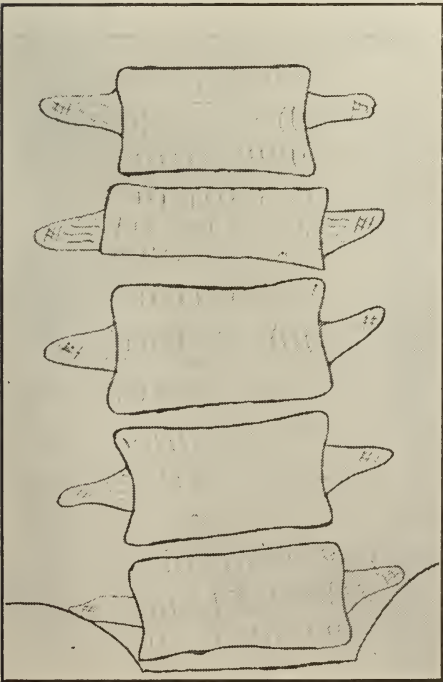


Fig. 17

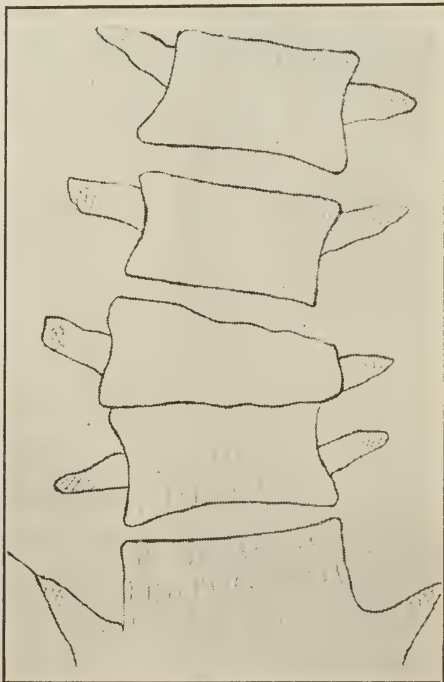


Fig. 18

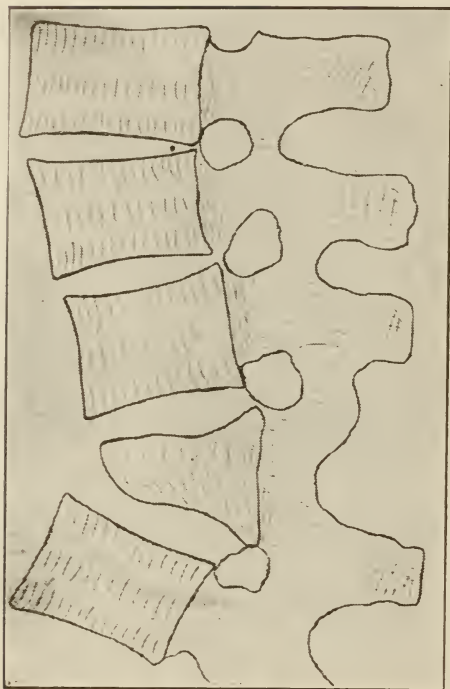


Fig. 19.

FIG. 1. Case I. Antero-posterior view. Apparently no fracture or dislocation. Compare with Fig. 2 same case.

FIG. 2. Case I. Lateral view showing fracture and dislocation of the 3rd cervical vertebra. Compare with Fig. 1.

FIG. 3. Case II. Lateral view showing extensive fracture of the 3rd, 4th and 5th cervical vertebrae.

FIG. 4. Case III. Lateral view showing fracture of the 5th cervical vertebra.

FIG. 5. Case IV. Lateral view showing fracture of the 5th cervical vertebra.

FIG. 6. Case V. Lateral view showing fracture of the 5th cervical vertebra.

Fig. 7. Case VI. Lateral view showing fracture of the 4th cervical vertebra.

FIG. 8. Case VII. Antero-posterior view showing fracture of the 5th thoracic vertebra.

FIG. 9. Case VIII. Antero-posterior view showing fracture of the 12th thoracic vertebra.

FIG. 10. Case IX. Antero-posterior view showing fracture of the 9th thoracic vertebra.

FIG. 11. Case X. Antero-posterior view showing fracture of the 10th thoracic vertebra.

Fig. 12. Case XI. Antero-posterior view showing fracture of the 8th thoracic vertebra.

FIG. 13. Case XII. Antero-posterior view showing fracture of the 7th thoracic vertebra.

FIG. 14. Case XIII. Antero-posterior view showing fracture of the 1st and 2nd lumbar vertebra.

FIG. 15. Case XIV. Antero-posterior view showing fracture of the 4th lumbar vertebrae.

FIG. 16. Case XV. Antero-posterior view showing fracture of the 3rd lumbar vertebra.

FIG. 17. Case XVI. Antero-posterior view showing fracture of the 2nd lumbar vertebra.

FIG. 18. Case XVII. Antero-posterior view showing fracture of the 3rd lumbar vertebra.

FIG. 19. Case XVIII. Lateral view showing fracture of the 4th lumbar vertebra.

NOTE.—Dr. Abbott is to publish a paper on the treatment of fractures of the spine in a following issue of this JOURNAL.

Necrology.

WILLIAM PAGE McINTOSH.

U. S. Public Health Service (1855-1916).

Dr. McIntosh was three times in Portland on duties connected with the Health Service of the nation, belonged to one or two of the Portland medical clubs, and for these reasons it is a satisfaction to the necrologist of the Maine Medical Association to speak briefly of his career.

He was born in Macon, Georgia, June 14, 1855, the son of Dr. Marcellus Erastus and Jane McBride McIntosh, his father being a practitioner of more than ordinary skill and a surgeon in the Confederate Army in the Civil War. He was one of the first to crush stones in the bladder in the South, and, like other physicians, compounded his own drugs, a habit followed by his son during his medical education. William Page McIntosh was educated at West Point College in Georgia, taught school and studied medicine at Pine Bluff, Arkansas, practiced for a while on a license in Arkansas, and obtained his degree at the College of Physicians and Surgeons at Baltimore, carrying off the coveted gold medal for the best examination passed by any graduate. He studied post graduate at Johns Hopkins, and in 1884 was appointed to the charge of Bay View Hospital, near Baltimore, with about a thousand inmates under its roof. Having determined to enter the Public Health Service, he resigned from this position in 1886, and, obtaining an appointment, was ordered first to Memphis, and from that post he gradually occupied the most important positions in the South. During this time he practically rebuilt the old hospital at Mobile, studied every epidemic of yellow fever, suggested the bathing of parts of the body exposed to mosquitos and yellow fever germs with citronella oil and alcohol, and traveled about extensively during small-pox epidemics, and zealously advocated the vaccination of even the newly born infants in the regions affected.

Dr. McIntosh made a temporary visit to Portland about 1893, lived here steadily for six years from 1903, then left for Baltimore, and again returned to Portland, from which post he retired from active service, and died from the effects of chronic Bright's disease, May 27, 1916. He married June 13, 1886, Miss Isabel Warfield Stinson, of Catonsville, Maryland, and is mourned by her and three

surviving children. Their home life in Portland, as many of us knew it, was very beautiful and hospitable in the highest degree.

Of the many excellent papers from the pen of this remarkable physician, mention may be made of "Cases of Spinal Fractures" cured by reduction and extension; another one, "Syphilitic Contagion from Drinking Cups and Kisses;" another, "On the Bier Treatment in Acute Inflammations," and a final one, "On a Rare Rupture of the Heart." Many of these papers were introduced by an apt quotation, showing the writer's wide reading. Dr. McIntosh was exceedingly interested in the study of yellow fever and other contagious diseases, and was a brilliant expert in the intravenous injection of mercurials and salvarsan, performing that delicate manipulation with rare accuracy and skill. In his bodily appearance and face, with his high coloring and clear cut features, he was a fine man to look upon in the height of his career, and everybody meeting him instinctively regarded him as a man of mark amongst the multitudes around us.

J. A. S.

JOHN MACAULY EAGER, M. D.

U. S. Public Health Service (1862-1916).

Many physicians in Maine who made the acquaintance of this charming man and very skillful public health officer will regret to hear of his sudden death at Naples, Italy, from heart disease, at the early age of 52 years. He died on Thursday, the 17th of August last, and a few words concerning him are here diffidently offered in memory of a skillful surgeon and friend.

Dr. Eager was born in New York, April 14, 1862, obtained his medical degree at the College of Physicians and Surgeons in New York, together with the Hersen gold medal for proficiency, in 1888. He was interne at Blackwell's Island Hospital for a while, R. R. surgeon on the Pennsylvania system and was admitted to the U. S. Public Health Service in 1891. He obtained his full surgery in 1907, and in 1912 was attached to the U. S. Consulate at Naples, as foreign agent of the government, and did much to prevent the introduction of cholera into this country. He came back to Portland a second time as public health inspector, then went back once more to Naples on service like that in which before he had shown great skill, and there he died, leaving a widow, and two sons, both in the U. S. Army.

Dr. Eager was a delightful man to meet, a student in every sense of the word, yet in the companionship of medical men very glad to talk of Italian conditions. At one of the last meetings of the Clinical Society, he delighted his hearers with a vivid account of his experiences in dealing with Italian emigrants bound for this country. He wrote much on American medical history and on yellow fever, was highly interested in botany and anthropology, and made much of the books on this topic in our public library, where, evening after evening, he was always to be found, in the company of his fascinating wife, equally interested with him in the reading of books. Dr. Eager served two long terms as a quarantine officer in Portland harbor, and endeared himself to all with whom he came in contact, officially and personally. He was a very dear friend to have, and now to hold in fond memory of the past.

J. A. S.

NEW AND NON-OFFICIAL REMEDIES.

FERRIC CACODYLATE: IRON CACODYLATE.—A ferric salt of cacodylic acid containing from 39.7 to 44.9 per cent. arsenic (As). A grayish-brown powder, soluble in water. The use of ferric cacodylate has been proposed in cases where the effects of iron salts and the mild arsenic effect of cacodylates is desired. Dosage: From 0.015 to 0.1 Gm.

AMPULES IRON CACODYLATE, Mulford, 0.03 Gm.—Each ampule contains ferric cacodylate 0.03 Gm. in 1 Cc. solution. The H. K. Mulford Co., Philadelphia.

AMPOULES IRON CACODYLATE, Squibb, 0.03 Gm.—Each ampule contains ferric cacodylate 0.03 Gm. in 1 Cc. solution. E. R. Squibb and Sons, New York City (*Jour. A. M. A.*, April 7, 1917, p. 1043).

ACETYSALICYLIC ACID, Squibb.—A non-proprietary brand of acetylsalicylic acid complying with the standards of New and Non-official Remedies. E. R. Squibb and Sons, New York City.

ASPIRIN, L. & F.—A non-proprietary brand of acetylsalicylic acid complying with the standards of New and Non-official Remedies. Lehn & Fink, New York City (*Jour. A. M. A.*, April 28, 1917, p. 1261).

Medical War Notes.

EYESIGHT TESTING FOR THE WAR.

Soldiers should have good sight in both eyes, so that if one eye is injured the other can still be used. With two good eyes, also, judgment of distances is more correct than with one only. This ideal of two perfect eyes is to a certain degree carried to excess, because if soldiers are all compelled to use the right eye in aiming rifles and machine guns, then the use of the left, if the right is disabled, is exaggerated, because no drilling could be carried on if some used the left eye and the majority the right. Then, again, some persons are left eyed anyway, and what use can be made of them remains to be discovered. Useful men should not be thrown away for such a reason. Then, again, in case of mechanics, never called upon for anything but machine work, and ability as it were to see only to repair machinery, remove and put back screws, nuts and bolts, the perfect sight for soldiers aiming at a distance is not called for. If it is claimed that such mechanics might in case of war be needed as watch on deck, it would take a defect of sight a good deal more than 20/50 to prevent the sighting of enemy's vessels. A man with only one eye of 20/100 can see to run a machine gun, to sling a bomb, throw explosives of various sorts and to fight enemies near-at-hand.

The greatest defect in eyesight testing nowadays is the absence of precise information concerning the light to be thrown on the test letters. Ordinary daylight is not scientific, unless the light of a clear day is specified. Are letters to be printed white on a black background or black on a white background? Some people see normal with one sort and sub-normal with the other. Every specialist employs type with a light thrown upon the letters, but what standard of light is to be used for recruits? Nobody knows. Finally, many experts use a set of letters illuminated from behind, the light shining through a dense white curtain and throwing off the letters in bold and plain relief.

With such a test, many people see at least one to two-tenths better than by the best of electric light thrown against the letters from in front. I lately passed a man with 20/30 in one eye and 20/40 in the other by this sort of types, whilst another examiner, utilizing ordinary daylight on a day that was overcast, found the vision only 20/40 in one and 20/60 in the other.

From this very brief suggestion, it is easy to see that a better standard for eyesight testing for recruits should be agreed upon, and at once.

CARE OF THE FEET IN PEACE AND IN WAR.

Physicians should make better study of the feet and the care of them than is now the habit. The first requirement of a shoe, for instance, is that it should be shaped properly, straight ahead from heel to great toe. Any turn of the foot abandoning the straight heel-toe line makes it impossible for soldiers to march. Teaching children to toe out is a serious error, for it leads to broken-down arches of the feet, and now that we are bound for military training this should be got rid of. All children in good foot condition tread straight ahead.

Foot cloths are better than stockings for long marches. Made out of heavy linen or muslin, and smeared thoroughly with tallow, they fit the foot better than any stockings. Or the tallow can be melted and the foot cloth dipped into it. After the tallow hardens the cloth can be wrapped about the feet. In marching, shoes for feet thus covered must be larger than those used with stockings.

Feet should be washed daily, dried, and then bathed and hardened in alcohol. Perspiring feet should be bathed often in 1 to 3000 chromic acid solution.

Some years ago the epigram that follows came into the writer's mind and has clung there fast, forever since. Here it comes out once more for a new generation: Happiness depends a great deal on how our shoes fit.

MALINGERING IN RECRUITS.

Every surgeon examining conscripts for the proposed army will come across some men very reluctant to join the service. In some particular direction they will be malingerers. From my special point of view I call attention to assertions of defective sight in one eye. Various means for detecting the alleged defect have been brought forward from time to time. The simplest has, in my experience, been the use of one red and one green glass for each eye respectively. The person tested is then placed before a board containing red and green letters, printed on a black background. If these letters are all seen, provided of the proper size, say 20/20 or as large as perhaps 20/60, then the sight in both eyes is good, for a green-covered eye cannot see red letters on a black ground, nor can a red-covered eye see green letters on a black ground. Seeing *ALL* the letters with both eyes open, is positive proof

that both eyes see something. Having proved that, it is easy to go on to ordinary eyesight testing with the standard types.

A very curious fact which I have observed twice in the past two years is that dentists, making use of emetine for dental purposes, have suffered from an obstinate conjunctivitis, from a bit of emetine or a drop of emetine solution flying into the eye. In one patient both eyes were affected; in the other, but one. Now, oddly enough, the war has brought to light a new form of malingering which is called *ippecacuanha conjunctivitis*, identical in its appearances with that due to emetine. Malingerers wanting to keep out of battles, to avoid death, are feigning irritation of the eyes and careful watching has resulted in detecting the dusting of *ippecacuanha* powder into one or both eyes at intervals sufficient to continue a chronic appearing conjunctivitis. Against this malingering into which I need not deeper call your attention, recruiting surgeons must now be on their guard as the fashionable eye disease to keep soldiers off of the firing line.

Ipecacuanha conjunctivitis can be detected by rubbing gun cotton along the eye-lid and conjunctiva to take up the discharge. Dissolve in ether and alcohol, evaporate with water, then test microscopically and the *ippecacuanha* granules can be discovered. Sometimes starch granules are found, and treated with iodines, they become blue. The discoloration is mostly confined to the conjunctiva of the lower lid, which looks like raw, lean ham in color. If much *ippecacuanha* is used, the conjunctiva gets very red and looks like trachoma. Eversion of upper lid shows normal conditions and causes the malingering disease to be diagnosticated. It has been found that soldiers carry the powder in their watch pockets or in the folds of head dress or cap.

A great many other methods of detecting diseases thus feigned can be found in the text-books and often have to be studied in order to obtain more positive detection. Careful study of this curious evasion of humanity, from dread of death or wounds, is oftentimes rewarded by obtaining decisive results and learning new sources of the curiosities of human perverseness in times of war, or, as often, in times of peace.

Let me add, that testing of the hearing is also important in war times, and that great care is needed to get the exact amount of hearing, so that, if good, the soldier cannot later claim a pension for alleged deafness present at the start. Nor can he be pensioned on basis of loss of hearing occurring with too great suddenness from normal ears when enlisted. The double-tubed stethoscope is the best test, one tube being closed with cotton and a few words whispered into the other. Then, again, in testing from across a room, do not let the recruit see

your lips. Finally, in alleged loss of hearing in one ear, the best test is to close the stethoscopic tube leading into the good ear, whisper into the common orifice, and every word heard proves to have been heard in the asserted deaf ear. This is as old as the hills, but forgotten, sometimes, to-day. Nor should any surgeon make the common blunder of dropping a coin on the floor and seeing the deaf person turn around think that the hearing is good, for the man did not *HEAR* the coin drop on the floor, he merely *FELT* it by bone conduction through his feet upward.

INFECTION OF THE TEAR CANAL IN RECRUITS.

Owing to many apparently slight injuries from missiles, bits of lead from shells, pieces of copper from cartridges, and so on, during the present war, and which have been followed by disastrous results to the sight owing to previous overlooked infection of the tear canal, attention should now be called to the desirability of examining surgeons satisfying themselves at the physical examination of recruits that this canal is in a normal condition.

It has long been known that ulcerations or mere abrasions of the cornea from bits of steel, emery, barbs of grass or grain, oftentimes become desperately serious to the sight of an injured eye if suppuration of even the lowest form is present in the tear canal. The infection, if present there, extends with great rapidity to the slightest abrasions of the cornea, abscess and hypopyon follow, and sight is irretrievably lost, often, too, in spite of early and active treatment and operation. This lesson, taught often enough in our hospitals, occasionally in private practice, and enormously now in time of war injuries, emphasizes of itself the need that recruiting surgeons should press upon the tear sac of every recruit to see if there is any oozing from the punctum. Very slight force is needed to make this test successful. If in doubt, the surgeon can plug each nostril with a bit of cotton, instill into the inner corner of the eye a drop of a very weak solution of methylene-blue; the head is then held forward, and a pervious tear canal shows the coloring on the cotton in the nostrils.

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*Editorial Comment.***MEDICAL DEFENSE AGAINST MALPRACTICE SUITS.**

So many members of our Association seem to fail to understand what the term "Medical Defense" means that it is the duty of the JOURNAL to inform them briefly, in order that at a discussion to take place before the House of Delegates in June, and the Association itself at a later date, members may have some idea of the plan.

For many years, physicians have been subjected to lawsuits for alleged malpractice, and such suits will continue so long as brother physicians called in to see the patients of other physicians fail to keep their opinions to themselves, for the cause of most suits is a remark made by another physician, the patient takes it up, cherishes it, hears that his first physician is insured, does not care for that man's reputation or feelings, but sees a chance to mulct a corporation insuring against such suits. Moreover, physicians testify against brother physicians largely owing to the chance of a promised fee to be obtained from the insuring corporation. Humanely speaking, it is cruel, that a physician should be sued at all, and it is harder still that his hard-earned reputation should be assailed by other physicians.

The idea of "Medical Defense" is to band physicians together to prevent such suits, by positively refusing to testify in any case against a brother physician, and from a monetary point of view by that defense to save a large insurance fee every year. Every physician insured in Maine pays as many DOLLARS a year for insurance against lawsuits as other physicians in eighteen states in the Union pay CENTS, and the humiliation of seeing and hearing brother physicians appearing in the courts of law against another is spared the community and the profession alike.

J. A. S.

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May 1, 1917.

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380. Littlefield, J. G., So. Paris, O.
381. Lombard, H. A., Bridgton, C.
382. Lombard, H. L., Bridgton, C.
383. Lombard, L. S., So. Portland, C.
384. Longfellow, J. W., Machias, Wash.
385. Lord, P. C., Kennebunk, Y.
386. Lougee, A. J., Fryeburg, C.
387. Lyford, W. H., Vinal Haven, Kn.
388. Mabry, C. J., No. Vassalboro, Ke.
389. MacDougal, W. E., Millinocket, Pe.
390. MacVane, E. F., Portland, C.
391. Madden, M. C., Old Town, Pe.
392. Makepeace, B. F., Farmington, F.
393. Maloney, D. A., Robinson, Wash.
394. Mann, F. W., Houlton, Ar.
395. Mann, L. L., Augusta, Ke.
396. Mansfield, Blanche, M., Bangor, Pe.
397. March, R. H., Guilford, Pi.
398. Marcon, L. B., Berlin, N. H.
399. Marion, J. W. J., Calais, Wash.
400. Maroon, J. L., Portland, C.
401. Marquis, E. M. C., Oldtown, Pe.
402. Marsh, S. N., West Enfield, Pe.
403. Marshall, L. H., Hebron, O.
404. Marshall, N. M., Portland, C.
405. Marshall, S. B., Alfred, Y.
406. Marson, E. J., Nash, Da.
407. Marston, H. E., No. Anson, So.
408. Mason, H. B., Calais, Wash.
409. Mason, L. S., Bangor, Pe.
410. Mason, W. C., Bangor, Pe.
411. Maybury, R. L., Saco, Y.
412. Maynard, A. C., Biddeford, Y.
413. McAleney, J. L., Portland, C.
414. McCann, Daniel, Bangor, Pe.
415. McCarthy, E. M., Rumford, O.
416. McCarrison, J. O., No. Berwick, Y.
417. McCurdy, C. L., Bangor, Pe.
418. McDonough, E. J., Portland, C.
419. McDonough, T. H., Brownville, Pi.
420. McFayden, James, Milo, Pi.
421. McKay, R. I., Augusta, Ke.
422. McNally, W. P., Bangor, Pe.
423. McNamara, W. F., Presque Isle, Ar.
424. McNeil, H. D., Bangor, Pe.
425. McVey, J. J., Corinna, Pe.
426. Menges, O. A., Athens, So.
427. Merrill, E. D., Foxcroft, Pi.
428. Merrill, H. P., Portland, C.
429. Merrill, P. S., Waterville, Ke.
430. Miller, H. W., Brewster, N. Y.
431. Millett, Adelbert, Belfast, Wal.
432. Milliken, H. A., Hallowell, Ke.
433. Milliken, H. E., Portland, C.
434. Milliken, H. J., Bangor, Pe.
435. Milliken, J. S., Readfield, Ke.
436. Milliken, W. S., Madison, So.
437. Miner, W. N., Calais, Wash.
438. Mitchell, Alfred, Portland, C.
439. Mitchell, F. W., Houlton, Ar.
440. Moore, E. L. I., Portland, C.
441. Moran, Wm., Portland, C.
442. Morgan, G. P., Dover, N. H., N. R.
443. Morrison, C. C., Bar Harbor, H.
444. Morse, F. W., Canton, O.
445. Moulton, Albert W., Portland, C.
446. Moulton, B. M., Springvale, Y.
447. Moulton, C. A., Hardland, So.
448. Moulton, H. M., Cumberland, C.
449. Moulton, W. B., Portland, C.
450. Moulton, W. Bean, Portland, C.
451. Mullin, S. S., Bath, Sa.
452. Murphey, Alex. Lord's Cove, Deer Island, N. B.
453. Murphey, H. J., Dexter, Pe.
454. Nash, A. W., Jefferson, Kn.
455. Nason, C. J., Winterport, Pe.
456. Nason, W. H., Hampden, Pe.
457. Neal, G. A., Southwest Harbor, H.
458. Nealey, E. T., Bangor, Pe.
459. Ness, William, Lewiston, An.
460. Newcomb, C., Clinton, Ke.
461. Nichols, Estes, Portland, C.
462. Nichols, J. W., Farmington, F.
463. Nile, J. A., Rumford, O.
464. Norris, L. F., Bangor, Pe.
465. North, C. D., Tenant's Harbor, Kn.
466. Northcott, E. M., Portland, S. M.
467. Norton, C. E., Lewiston, An.
468. Noyes, B. L., Stonington, H.
469. Noyes, E. J., W. Lovell, O.
470. Noyes, H. L., Rumford, O.
471. Noyes, L. F., Rumford, O.
472. Noyes, S. E., Rumford, O.
473. Nutting, J. D., Jr., Hallowell, Ke.

474. O'Brien, C. R., Bangor, Pe.
475. O'Brien, Dennis J., Portland, C.
476. O'Connell, G. B., Lewiston, An.
477. O'Connor, M. J., Rockland, Kn.
478. O'Neill, E. D., Biddeford, Y.
479. O'Neill, J. L., Portland, C.
480. Osgood, H. W., Bangor, Pe.
481. Overlook, S. B., Pomfret, Conn., N.R.
482. Owen, H. A., Bar Mills, Y.
483. Palmer, C. A., Brunswick, C.
484. Parady, L. W., Rumford Point, O.
485. Parizo, H. L., Waterville, Ke.
486. Parker, C. C., Winthrop, Ke.
487. Parker, C. F., No. Windham, C.
488. Parker, R. A., Auburn, An.
489. Parmalee, W. W., Auburn, An.
490. Pastor, L. M., Bangor, Pe.
491. Patten, J. H., Bar Harbor, H.
492. Patterson, H. J., Portland, C.
493. Peables, A. M., Auburn, An.
494. Peabody, F. A., Richmond, Sa.
495. Pease, W. M., Dixfield, O.
496. Peaslee, C. A., Bath, Sa.
497. Peaslee, C. A., Auburn, An.
498. Pepper, J. L., Madison, So.
499. Perkins, J. W., Wilton, F.
500. Peters, W. C., Bangor, Pe.
501. Philbrick, C. S., Bangor, Pe.
502. Phillips, F. E., Wells, Y.
503. Phillips, G. A., Bar Harbor, H.
504. Phillips, J. E., Southwest Harbor, H.
505. Philoon, C. E., Auburn, An.
506. Pierce, E. F., Lewiston, An.
507. Pillsbury, C. W., Saco, Y.
508. Pingree, H. A., Portland, C.
509. Piper, J. O., Solon, So.
510. Pitman, M. W. H., River-dale-on-Hudson, N. Y.
511. Poor, L. H., Webb's Mills, C.
512. Porter, E. A., Pittsfield, Pe.
513. Porter, M. L., Danforth, Wash.
514. Porter, J. W. H., Caribou, Ar.
515. Potter, J. G., Houlton, Ar.
516. Potter, J. L., Guilford, Pi.
517. Poulin, J. E., Waterville, Ke.
518. Powell, L. L., Saco, Y.
519. Pratt, G. L., Farmington, F.
520. Pratt, H. S., Farmington, F.
521. Prescott, G. C., Biddeford, Y.
522. Prescott, H. L., Kennebunkport, Y.
523. Presson, Dorris M., Augusta, Ke.
524. Price, W. N., Richmond, Sa.
525. Pritham, F. J., Greenville Junction
526. Pudor, G. A., Portland, C.
527. Purington, W. A., Foxcroft, Pi.
528. Purington, Watson, Kenduskeag, Pe.
529. Putnam, H. L., Houlton, Ar.
530. Randall, J. A., Old Orchard, Y.
531. Randall, R. N., Lewiston, An.
532. Rankin, C. B., Mechanic Falls, O.
533. Redman, F. L., Corinna, Pe.
534. Redman, S. J., Dexter, Pe.
535. Reed, A. P., Naples, S. M.
536. Reynolds, R. L., Waterville, Ke.
537. Richardson, H. J., Bradford, Pe.
538. Ridlon, B. D., Portland, C.
539. Ridlon, C. H., Gorham, C.
540. Roberts, H. H., So. Poland, An.
541. Robinson, C. M., Portland, C.
542. Robinson, D. A., Bangor, Pe.
543. Robinson, E. F., Falmouth, C.
544. Robinson, F. J., Fairfield, So.
545. Robinson, H. S., Bangor.
546. Robinson, W. W., Portland, C.
547. Rogers, J. K. P., So. Portland, C.
548. Rose, A. M., Rangeley, F.
549. Ross, F. A., So. Berwick, Y.
550. Ross, F. M., Kennebunk, Y.
551. Rowe, A. W., Bangor, Pe.
552. Rowe, G. D., Providence, R. I., N.R.
553. Rowe, W. T., Rumford, O.
554. Russell, B. W., Lewiston, An.
555. Russell, J. P., So. Brewer, Pe.
556. Samson, H. W., Monson, Pi.
557. Sanborn, J. I., Portland, C.
558. Sanborn, J. W., Rockland, Kn.
559. Sanger, E. B., Bangor, Pe.
560. Sawyer, A. D., Ft. Fairfield, Ar.
561. Sawyer, A. L., Ft. Fairfield, Ar.
562. Sawyer, Alton, Gardiner, Ke.
563. Sawyer, J. W., Dexter, Pe.
564. Sawyer, S. E., Lewiston, An.
565. Sawyer, W. G., Madison, So.
566. Scammon, C. L., E. Millinocket, Pe.
567. Scannell, S. E., Lewiston, An.
568. Schafer, John W., Brunswick, C.
569. Schneider, G. A., Island Falls, Ar.
570. Schriver, A. E., Milo, Pi.
571. Schriver, A. H., Brewer, Pe.
572. Searle, F. W., Portland, C.
573. Sewall, J. J., Newport, Pe.
574. Shannon, J. H., Saco, Y.
575. Shapleigh, E. E., Kittery, Y.
576. Shaw, A. A., Clinton, Ke.
577. Shedd, G. H., No. Conway, C.
578. Shedd, J. Z., No. Conway, C.
579. Shurrard, W. D., Winn, Pe.
580. Silsbury, E. B., Rockland, Kn.
581. Simmons, W. H., Bangor, Pe.
582. Simons, R. D., Gardiner, Ke.
583. Sincook, W. E., Caribou, Ar.
584. Skolfield, E. B., East Corinth, Pe.
585. Sleeper, C. M., So. Berwick, Y.
586. Sleeper, F. E., Biddeford, Y.
587. Small, A. E., Bangor, Pe.
588. Small, Elmer, Belfast, Wal.
589. Sleeper, F. E., Sabattus, An.
590. Sleeper, H. S., Lewiston, An.
591. Small, F. E., Biddeford, Y.
592. Small, M. M., Waterville, Ke.
593. Small, R. D., Portland, C.
594. Small, E. M., Auburn, An.
595. Smith, A. K. P., Bangor, Pe.
596. Smith, A. L., Machias, Wash.
597. Smith, C. D., Portland, C.
598. Smith, F., Fremont, Bar Harbor

- and Wash., D. C.
599. Smith, F. W., York Village, Y.
600. Smith, H. W., Norridgewock, So.
601. Smith, J. R. N., Milltown, N. B.
602. Smith, O. P., Portland, C.
603. Smith, W. W., York Harbor, Y.
604. Snell, F. W., Isle au Haut, Wash.
605. Snipe, L. T., Bath, Sa.
606. Snow, H. A., Milo, Pi.
607. Snow, H. E., Bucksport, Pe.
608. Sollima, E. L., Portland, C.
609. Somers, P. E., Portland, C.
610. Spalding, J. A., Portland, C.
611. Spear, W. M., Rockland, Kn.
612. Sprague, O. A., Turner, An.
613. Stanhope, A. H., Dover, Pi.
614. Stanwood, A. L., Rumford, O.
615. Starrett, J. F., Bangor, Pe.
616. Stetson, E. F., Damariscotta, Kn.
617. Stetson, E. G. A., Brunswick, C.
618. Stevens, E. L., Belfast, Wal.
619. Stevens, H. E. E., Lewiston, An.
620. Stevens, T. H., Boothbay Harbor, S. M.
621. Steward, C. W., Rockport, Kn.
622. Stewart, D. M., So. Paris, O.
623. Stickney, Laura B., Saco, Y.
624. Stimpson, A. J., Waterford, O.
625. Stinchfield, W. S., Skowhegan, So.
626. Stinson, H. K., National Soldier's Home, Ke.
627. Stott, A. A., Woolwich, Sa.
628. Strout, A. C., Garland, Pe.
629. Strout, F. E., Gardiner, Ke.
630. Stubbs, R. H., Augusta, Ke.
631. Sturdivant, G. L., Yarmouth, C.
632. Sturgis, John, Auburn, An.
633. Sturgis, K. B., Augusta, Ke.
634. Sturgis, J. L., New Gloucester, S.M.
635. Sturtevant, A. H., Augusta, Ke.
636. Sturtevant, J. M., Dixfield, O.
637. Sturtevant, J. S., Dixfield, O.
638. Sullivan, E. V., St. Stephen, N. B.
639. Sullivan, M. B., Dover, N. H., N.R.
640. Sullivan, P. S., Sanford, Y.
641. Swasey, G. B., Portland, C.
642. Swift, H. M., Portland, C.
643. Sylvester, C. B., Harrison, C.
644. Tarbell, F. W., Smyrna Mills, Ar.
645. Tash, I. P., Fairfield, So.
646. Taylor, C. J., Bangor, Pe.
647. Thayer, Addison, S., Portland, C.
648. Thayer, Augustus S., Portland, C.
649. Thayer, F. C., Waterville, Ke.
650. Thibodeau, J. A., Madison, So.
651. Thomas, C. F., Caribou, Ar.
652. Thomas, C. F., Jr., Caribou, Ar.
653. Thomas, C. M., Brewer, Pe.
654. Thomas, C. O., Brewer, Pe.
655. Thombs, S. B., Portland, C.
656. Thompson, C. E., Saco, Y.
657. Thompson, H. E., Bangor, Pe.
658. Thompson, J. B., Bangor, Pe.
659. Thompson, J. F., Portland, C.
660. Thompson, P. P., Portland, C.
661. Thompson, W. S., Standish, C.
662. Thornley, R. A., Bangor, Pe.
663. Tibbetts, Geo. A., Portland, Me.
664. Tibbetts, G. B., Orrington, Pe.
665. Tibbetts, R. R., Bethel, O.
666. Tobie, C. H., Mechanic Falls, O.
667. Tobie, W. E., Portland, O.
668. Tolman, G. A., Dover, N. H., N. R.
669. Tomlinson, E. E., Orono, Pe.
670. Totman, V. C., Oakland, Ke.
671. Towne, J. G., Waterville, Ke.
672. Tracy, K. B., Mars Hill, Ar.
673. Graynor, C. F., Biddeford, Y.
674. Trefethen, W. J., Wilton, Pe.
675. Trickey, W. B., Pittsfield, Pe.
676. Trufant, L. H., Norway, O.
677. Turner, O. W., Augusta, Ke.
678. Tustin, Ruth, Eastport, Wash.
679. Twitchell, A. H., Old Town, Pe.
680. Twitchell, H. P., Portland, C.
681. Tyson, F. C., Augusta, Ke.
682. Underhill, C. S., Franklin, H.
683. Upham, G. C., Caribou, Ar.
684. Upham, R. C., Fort Kent, Ar.
685. Upton, C. W., Sherman, Ar.
686. Vanamee, T. O., Portland, C.
687. Varney, J. R., Old Town, Pe.
688. Varrell, W. W., York Harbor, Y.
689. Vickery, O. S., Belfast, Wal.
690. Vosburg, S. E., Augusta, Ke.
691. Wakefield, F. S., Lewiston, An.
692. Wakefield, R. W., Bar Harbor, H.
693. Walker, A. G., Houlton, Ar.
694. Walker, F. D., N. Vassalboro, Me.
695. Walling, J. A., Milbridge, Wash.
696. Walton, R. D., Frankfort, Pe.
697. Ward, P. M., Houlton, Ar.
698. Wardwell, M. A., Penobscot, H.
699. Warren, S. P., Portland, C.
700. Washburn, G. E., Augusta, Ke.
701. Way, G. F., Jr., Lincoln, Pe.
702. Webber, M. A., Portland, C.
703. Webber, M. C., Portland, C.
704. Webber, W. E., Lewiston, An.
705. Webster, F. H., Rockland, Kn.
706. Webster, F. P., Portland, C.
707. Webster, H. B., Castine, H.
708. Weeks, De Forest, Portland, C.
709. Weidmann, S. Y., Rockport, Kn.
710. Welch, F. J., Portland, C.
711. Weld, G. G., Old Town, Pe.
712. Wentworth, B. F., Scarboro, Y.
713. Wentworth, D. W., Sanford, Y.
714. Westcott, C. P., Portland, C.
715. Weymouth, F. D., Charleston, Pe.
716. Weymouth, H. A., Saco, Y.
717. Wheeler, F. E., West Paris, O.
718. Wheel, F. E., Rumford, O.
719. White, E. A., Columbia Falls, Wash.
720. White, V. O., E. Dixfield, F.
721. White, W., Bridgewater, Ar.

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| 722. Whitmore, Wm., Portland, C. | 730. Williams, A. R., Phippsburg, Sa. |
| 723. Whitney, W. E., Bangor, Pe. | 731. Williams, B. P., Bingham, So. |
| 724. Whittier, F. N., Brunswick, C. | 732. Williams, C. E., Auburn, An. |
| 725. Wight, E. A., Bolster's Mills, O. | 733. Williams, C. E., Houlton, Ar. |
| 726. Wight, I. H., Bethel, O. | 734. Williams, H. E., Mt. Vernon, Ke. |
| 727. Wiley, A. G., Bar Mills, Y. | 735. Williamson, W. D., Portland, C. |
| 728. Wilkinson, H. E., Eagle Lake, Ar. | 736. Willis, J. L. M., Eliot, Y. |
| 729. Willard, L. E., Saco, Y. | |
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Medical Notes.

SODIUM CITRATE IN PNEUMONIA.

Those who treat this enormously fatal disease, and most of the physicians of to-day are enrolled in that number, will study with attention a paper by Stern in the *New York Medical Journal* for April 21. After going over the reasons for his belief that new modes of treatment are needed from more promising points of view, the author passes, in the conclusion of his noteworthy paper, to a discussion of the value of sodium citrate. It should be given in doses of 60 grains every two hours in eight ounces of water for its diuretic and diaphoretic effect, the water adding to aid gastric tolerance. Respiration that was rapid, with pain, immediately lessens and becomes less painful, and the temperature drops rapidly in the ensuing twenty-four hours. The remedy should be continued steadily, for any discontinuation inside of five to seven days is followed by recrudescence. The idea of the new medication, and in this particular way of administration, is to obtain diaphoresis and diuresis and to draw on the skin as a valuable aid in getting rid of waste products. The author is likewise inclined to believe that similar treatment in acute tuberculosis will prove of much avail when carefully studied.

In his list of cases treated in this way, in all stages of pneumonia. Dr. Stern has had excellent success, so far, and intends to continue his studies and experiments with the promising remedy, sodium citrate.

J. A. S.

RADIAL NEURALGIA OF MOTOR CAR DRIVERS.

A very recent paper before the French Electrical Society, by Dr. Chartier, mentioned instances of a new form of neuralgia to which drivers of motor cars and trucks, whether amateur or professional, are liable. One arm being exposed rather more than the other on the steering wheel, currents of cool air slide up along the arm, the radial nerve is irritated, and a certain form of neuralgia is produced in a certain number of instances. This occurs almost as often in warm weather as in cold. The pain, generally severe, radiates into the neck and shoulders. Tingling and a sensation of heat or cold may also be felt in the first two fingers of the arm affected. The paper in which this new form of neuralgia is mentioned in detail, with cases, says nothing

about treatment or cure by any special drugs, but emphasizes the advantages and usefulness of high-frequency effluviations. Nor is anything said of prevention, but ordinary sense would suggest to persons first perceiving these curious sensations in the fingers and arms in the region of the radial nerve to close the sleeve about the wrist, or to prevent in any sensible way the air-currents gaining access to the nerve in question, and producing thus the ultimate neuralgia.

This especial form of disease, might, by the way, be entitled a by-product of war, because it was first observed in the arms of drivers of motor ambulances in hospital service in military regions.

J. A. S.

FOR SALE—The following equipment from Dr. Bassford's office:

X-Ray Coil High-frequency Machine, Electric Vibrator, and two Ten Plate Static Machines. For further information write

DR. L. F. CORTHELL, Y. M. C. A. BLDG., PORTLAND, ME.

Dakin's New Antiseptic CHLORAZENE



This new chlorine-carrying synthetic antiseptic, para-toluene-sodium-sulphochloramide, was developed in France and England by Dr. H. D. Dakin of the Rockefeller Institute and has been tested clinically, with fine results, in the war hospitals of France and England. Many encouraging reports from prominent surgeons in this country are being received daily.

YOU SHOULD USE IT BECAUSE

CHLORAZENE is a definite chemical compound.
CHLORAZENE is less irritant than the hypochlorites.
CHLORAZENE is a most powerful antiseptic.
CHLORAZENE is virtually noncaustic and nontoxic.
CHLORAZENE is stable.
CHLORAZENE does not coagulate the albumens of the tissues.
CHLORAZENE is supplied in convenient form: tablets and powder.

CHLORAZENE is being used in treating infected wounds received in modern warfare, and many physicians in civil practice report success in the use of Chlorazene in infections, including those of the mucous lined cavities and for burns, ulcers and skin lesions.

PACKAGES AND PRICES

CHLORAZENE is supplied in 4.6-grain tablets, in bottles of 100 at 60c. In powder; two special packages for general and hospital use: Hospital Package No. 1, to make 1 gallon of 1-percent solution, 55c. Hospital Package No. 2, to make 5 gallons of 1-percent solution, \$2.00. Chlorazene Surgical Cream, in 4-oz. jars, each, 60c. Prices on larger quantities on request. The trade will be stocked, but if your druggist is not supplied we shall be glad to supply you direct, from our home office or branches.

Literature on Request.

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County News and Notes.

ANDROSCOGGIN.

ANDROSCOGGIN COUNTY MEDICAL SOCIETY.

The Androscoggin County Medical Society held a special meeting Thursday night, April 26th, to listen to Dr. Cousins, of Portland. Dr. Cousins explained the Officers' Medical Reserve Corps and the Regular Medical Corps of the U. S. Army and urged the men to enroll in one or the other. Thirty-eight members of the society were present. All took application blanks and seemed much interested.

The regular May meeting was postponed, at suggestion of President Sawyer.

Adjourned.

L. F. HALL, *Secretary*.

CUMBERLAND.

PORTLAND MEDICAL CLUB.

The fifth meeting of the Portland Medical Club was held at the Columbia Hotel, May 3, 1917. Dr. Philip P. Thompson presided. Twenty-five members were present.

A committee, consisting of Drs. F. Y. Gilbert, DeForest Weeks and W. T. Skillin, was appointed to arrange for the annual outing in June.

Dr. F. L. Ferren, of Westbrook, was elected to membership.

Dr. F. Y. Gilbert reported two cases of sympathetic ophthalmia follow-



—by the President of the
Victor Electric
Corporation:

The ancient custom, that the purchaser must look out for himself lest the goods he buys are not as represented, is not the best spirit in today's American merchandising.

It is the desire of this new corporation to give concrete expression to the best thoughts and ideals of American merchandising by maintaining the highest possible standards of quality in product and in service to its customers. ■ ■ ■

The first rule written for the guidance of the Publicity Department reads as follows:

"All advertisements shall be absolutely truthful, both as to statements of facts and suggested ideas implied by copy." ■ ■ ■

This corporation is not posing as an ideal; but wishes to be understood as *striving* for ideals. The goods and the service are believed to be the best of today. There is being put into them more than mere expenditure of money—enthusiasm and loyalty to ideals. There is being wrought into the goods that which insures to the buyer articles even better than they are represented to be—that which evidences a sincerity of purpose.

C. F. Sammes

ing non-perforating wounds of the other eye. Sympathetic ophthalmia after wounds which do not perforate the globe of the other eye is very rare.

Dr. C. W. Foster reported a case of intermittent hematuria of unknown etiology. Cystoscopic examination showed that the bleeding came from the ureters, yet no evidence of kidney lesions could be found.

Dr. Carl M. Robinson, recently returned to America from work with the Harvard Unit, spoke on his "Experiences in a Base Hospital in France." His talk, coming as it did at this time, aroused great interest, and many questions were asked the doctor by the members.

Dr. Thomas Foster, also recently returned from France, talked in an entertaining manner about his work in the American ambulance in Paris.

H. M. SWIFT, *Secretary*.

SAGADAHOC.

SAGADAHOC COUNTY MEDICAL SOCIETY.

The regular meeting of the Sagadahoc County Medical Society was held at Bath, April 25th.

Dr. Wallace Webber, of Lewiston, was the guest of the evening.

POMPEIAN OLIVE OIL ALWAYS FRESH

It's very important that Physicians specify Pompeian Olive Oil when suggesting Olive Oil to patients, and insisting on patients securing this Standard Brand.

THE POMPEIAN COMPANY
GENOA, ITALY BALTIMORE, U. S. A.

THE STANDARD IMPORTED OLIVE OIL

Cholera Infantum versus Arsenical Poisoning from Insecticides —Which?

The similarity in symptoms makes it important to differentiate carefully in making your diagnosis

Arsenical fly poisons are all the more a menace in that the poisonous solutions are sweetened, making the dangerous potion enticing to children.

In the past physicians have denounced the poisonous phosphorous match, and this public danger has been eliminated. The baneful arsenical fly draughts merit like condemnation.

Following is an extract from "The Transmission of Disease by Flies," Supplement No. 29 to the Public Health Reports, April, 1916:

"Of other fly poisons mention should be made, merely for the purpose of condemnation, of those composed of arsenic. Fatal cases of the poisoning of children through the use of such compounds are far too frequent, and owing to the resemblance of arsenical poisoning to summer diarrhea and cholera infantum, it is believed that the cases reported do not, by any means, comprise the total. Arsenical fly-destroying devices must therefore be rated as extremely dangerous, and should never be used, even if other measures are not at hand."

The Housefly is a Typhoid Carrier

and filth distributor—always "fresh from the foulest filth of every pestilential kind." There is a reliable means of destroying this pest—use

TANGLEFOOT

Absolutely Non-Poisonous
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A discussion on enrolling in the Officers' Medical Reserve Corps brought out this fact, that no doubt many more would join if they had any idea what they were to do after once enlisting.

It was suggested that it would be advisable to have at the June meeting a member of the Army Medical Corps give to the Maine Medical Association, at one of its meetings, some idea of what is meant by the Officers' Medical Reserve Corps, and what is expected of those who sign.

R. C. HANNIGEN, *Secretary*.

YORK.

YORK COUNTY MEDICAL SOCIETY.

The eighty-eighth quarterly meeting of the York County Medical Society was held in the rooms of the Fish and Game Club in Springvale, Thursday, April 5th. The records of the January meeting were read and approved. Dr. Chas. E. Cook, of South Berwick, the President, was in the chair.

Dr. Richard A. Goss, Bowdoin Medical '03, Sanford, Dr. Edwin L. Thompson, Bowdoin Medical '87, Springvale, and Dr. Kenneth B. Tracy, U. of M. '12, Kennebunkport, were elected to membership.

Dinner was provided at the Springvale House at 1.30, following which Dr. T. J. Burrage, of Portland, presented a paper, "Chronic Arthritis due to Chronic Focal Infection." Much valuable information was derived from this address, which was unusually good in all respects, and a general discussion, interesting and profitable, developed. A note of thanks was extended to Dr. Burrage.

Adjourned at 4 o'clock.

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Personal News and Notes.

Dr. J. E. Brooks, of Eastport, who now holds a commission in the army, and formerly of Bangor, arrived in Augusta May 4th.

Drs. A. L. Sawyer and W. G. Chamberlain have applied for positions in the Officers' Medical Reserve Corps and will take examinations in the near future.

Dr. Kincaid, of Mars Hill, has returned from Boston, where he has been making special study of the eye, ear, nose and throat.

Dr. and Mrs. Gibson, of Houlton, have been visiting in Boston.

Dr. F. C. Small, Belfast, is taking a special post-graduate course at Harvard University.

Dr. and Mrs. Langdon T. Snipe, of Bath, are on a ten days' trip to Washington and New York.

Dr. Paul S. Hill, a member of the medical section of the regular army, is expecting any moment to be called into service and to be ordered abroad for duty as one of the 1,000 surgeons to be dispatched from this country as soon as the arrangements can be made. He will first be sent to Governors' Island, N. Y. harbor, where the mobilization will take place, and from there will proceed across the water.

Dr. J. S. Bragg left April 30th for New York to take a short post-graduate course, preparatory to entering the U. S. medical service.

Dr. Carl Merrill Robinson has returned from his nine months' service in the Red Cross Base Hospital in France, and resumes his practice, opening an office in the Leighton Building, Longfellow Square. Portland, Me. Dr. Tom Foster has also returned from service in the Base Hospital in France and expects to locate in Portland.



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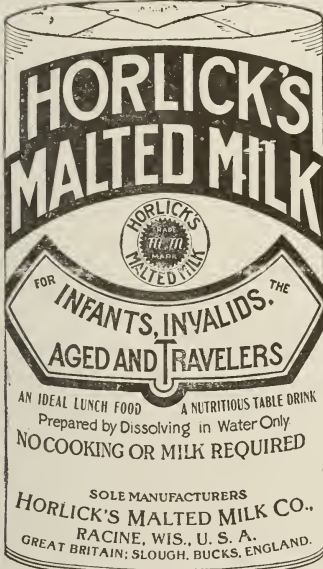
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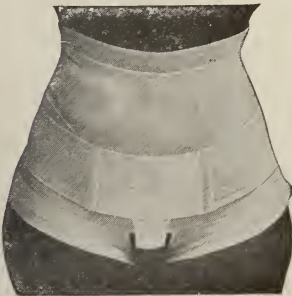
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TABLE OF CONTENTS

Original Articles—

To the Members of the Maine Medical Association, Greetings..... 337
Acute Unilateral Kidney Infections of Hematogenous Origin..... 338
Necrology..... 347

Emetine Dangerous to the Eyes.... 351
Compulsory Accident Insurance for Defectives: A War Instance.... 352
Salvarson and Some Substitutes.... 353
Acetomorphine or Heroin. What is in a Name..... 354

Editorial Comment—

Wax, Paraffin and Resin for Burns (Ambrin)..... 350
High Cost of Atropin Sulphate: Economy in Its Use Imperative.. 351

Miscellaneous—

Book Reviews..... 354
Notices 355
County News and Notes..... 355
Personal News and Notes..... 357

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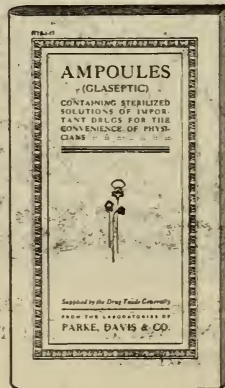
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VOL. VII.

JUNE, 1917.

No. 11

TO THE MEMBERS OF THE MAINE MEDICAL ASSOCIATION, GREETINGS.

Having been chosen President for the succeeding year, I am going to consider myself the war president of the Association, and I send out as first of all of my official documents, a word of encouragement to those who can be of medical service to the nation. You are placed in a position of great sacrifice by being asked to leave your practice, your means of living, your families. You are, however, to be rewarded in this sacrifice by the facts:

That you will receive at once on abandoning your practice a fair salary from the government, part of which you can turn over for the support and comfort of those at home.

That you are going to learn a great deal of modern medical and surgical knowledge which will be of unspeakable value to you for the rest of your lives.

That you are going to do more than your share to defend the nation, which, through no fault of its own, is now at war with the most powerful aristocracy that the world has ever known.

These three facts ought to encourage you to offer your services now, and to do your very best for the nation wherever ordered.

In the years that have passed since the Civil War, the most poignant regret amongst my friends of after life was, that they did not go to the front and fight as soldiers and be promoted for valor. When these men saw in later life how the living were permanently honored and the memory of those who died became more and more respected and hallowed, they realized their mistake. They were indeed, safe; but safe in the silent passing by of their former friends.

The need for surgeons is imperative. Let each one help as he can. As your President, I ask each one who goes to keep in touch with me, wherever he may be, and I will see to it that his comrades of the Association shall know of his safety, and of the good and satisfactory work that he is doing for the nation.

JAMES A. SPALDING, *President*, June, 1917.

***ACUTE UNILATERAL KIDNEY INFECTIONS OF HEMATOGENOUS ORIGIN.**

BY CLINTON N. PETERS, A. B., M. D., Portland, Me.

I have chosen this subject to present to a society of mixed medical men for several reasons, which I will outline briefly. I shall not consider the tubercular infections under this heading.

1. These are cases seen by the general practitioner in his daily routine, and may be closely allied, and follow a cycle of hematogenous infections, which of late years have been of vital interest to the medical science.

2. They occur more often than the subject would at first suggest, and are either wrongly diagnosed and confused with the common intra-peritoneal infections, or not diagnosed at all. Statistics claim that one in five is the proportion of correct diagnosis.

3. The general symptoms of prostration and toxemia are extreme, while the urinary findings are almost universally so bare of pathological contents as to deceive one not entirely familiar with the condition.

4. The symptoms are never such as to arouse the patient's suspicions of kidney infection and send them to a specialist. Invariably we are indebted to the general medical man for cases of this type.

Acute unilateral nephritis occurs as a secondary process to some general or focal infection. There are two distinct classes, dependent upon the causative agent.

*Read before the Portland Medical Society on April 5th, 1917.

In the first, which is by far the more common, and happily the less serious, the causative agent is of toxemic origin, elaborated by a general or focal infection, the seriousness of which generally so completely overshadows the renal condition that the kidney lesion is rarely differentiated; and while it adds a chapter to the already profound toxemia, it is doubtful if even its recognition would do more than gratify the careful diagnostician. This condition approaches more the type of acute congestion, and while post-mortem examinations show that cellular necrosis does frequently occur, surgical interruption is contraindicated on account of the already existing prostration from the primary infection.

The second class is of bacterial origin. A small embolus, detached from some focal infection, as tonsils, furuncles, abscesses or rheumatic infections, is carried by the blood stream directly to the kidney substance. Associated with this embolus are a few microorganisms, which, lodged in the capillary vessels of the glomerulus, set up a new focus of the disease, which spreads throughout the kidney by way of the tubules and lymph spaces. A single focus, not multiple foci, simultaneously excited, is the starting point, and from this rapid extension within the renal capsule follows. At no time is there an associated pyemia or septicemia, as we invariably find in the acute bilateral renal infections. In these the kidney disturbances are only manifestations of the general condition. In the unilateral infections, we have a walled-off inflammatory process within the organ, and the general condition is one of toxemia alone. This is the class of cases where early diagnosis is essential if the best results are to be expected. Here we have a condition where the *secondary* infection is of *primary* importance. Indeed, it so far outweighs the original condition that at times only a careful case history will bring to light the probable source.

Dr. J. H. Cunningham, of Boston, in a paper on this subject read before the Section on Genito-Urinary Diseases, at the Sixty-Fifth Annual Session of the American Medical Association in June, 1914, divides the pathology of this second class (that of bacterial origin), into the following two types, dependent on the end results.

TYPE NO. 1.—In this type, which is usually a hematogenous extension of some pyogenic process, the kidney is enlarged about half again its normal size from congested areas around the foci. There is cellular necrosis and pus formation, which may be circumscribed, and extend by the renal circulation until a number of small areas at relatively distant points within or directly beneath the capsule are formed. These may remain separate throughout the process or coalesce and form a larger abscess cavity. Should the resistance of the individual

be high, and the virulence of the invading organism low, the complete cycle will result in resolution and fibrous formation. The more often outcome, however, is a rapid and profound toxemia, which ends fatally, unless the offending organ is removed.

TYPE No. 2.—This type takes more the aspect of an ascending infection and is usually caused by the colon bacillus. Unlike the ascending infection, there is no associated pyelitis, and the pathology is similar to type No. 1, except there is no solution of tissue. On section the organ presents subcapsular areas of acute inflammatory infiltration, which may be so extensive as to occupy nearly the whole organ. The kidney may be very much enlarged, and the perinephric tissues become very edematous. The associated toxemia is less acute, and the condition much more likely to run a favorable course without surgical interruption than the former type. This is probably due to the lesser virulence and the more chronic nature of the invading organism.

The etiology of acute unilateral renal infections is not entirely clear. As before said, they always follow some primary infection. There seems to be a decided tendency to have one of the so-called rheumatic series precede when the condition is of pyogenic origin. Tonsillitis, acute rheumatic joint conditions, with the accompanied lowered resistance, are without doubt predisposing causes. In the five cases which I have seen, four give a history of this infection. Where the colon bacillus is the exciting factor, some previous intestinal infection is probable, although the histories are vague. Patients in adult life compose the majority of cases, the ages ranging from 20 years to 45 years. Women appear to be more frequently attacked than men in the limited reports I have been able to find.

The diagnosis is rather simple, if one bears in mind that the condition is a walled-off process, and is not deceived by the meagre findings in the urine. A quick onset, with nausea, vomiting and chills, accompanied by a rapid rise in temperature and progressive acceleration of the pulse, presents to the physician a most common picture. Pain in the abdominal region, with spasm of the rectus muscle, adds to the list for elimination, and complicates matters. Pain in the lumbar region, accompanied by costo-vertebral tenderness, should be the chief point to call the diagnostician's attention to the kidney. *Here is where the discrepancy occurs.* The urinary report from the laboratory shows albumen, a trace; epithelial cells, positive; white and red blood cells, a few. What febrile condition may not show this urine. There is nothing alarming here and the kidney is passed by, and a "watchful waiting" policy adopted.

For accurate results and correct diagnosis, cystoscopy should be resorted to as soon as tenderness at the costo-vertebral angle calls the attention of the physician to the kidney. Uteral catheterization and a comparison of the separately obtained urines will bring out the following in cases of unilateral kidney involvement. The well kidney excretes freely a normal urine of perhaps slightly lower specific gravity than usual. The diseased kidney secretes but a small amount of urine, of high specific gravity, dark color, and containing a slight amount of pus. Casts are frequently absent; red blood cells may or may not be found. Albumen is a constant feature, and the amount varies from a heavy trace to almost complete coagulation of the urinary specimen. Phenol-sulphone-phthalein, when injected intravenously or intramuscularly in 1 c. c. doses, is excreted in normal amounts by the healthy organ, and in much diminished or even negative quantity on the diseased side. The small amount of urine excreted by the affected organ, mixed with the increased amount of normal urine from the well side, accounts for the negative findings when a bladder specimen alone is examined. Uretal catheterization leaves very little to the imagination and is an important step in clearing up the diagnosis.

Dr. John R. Caoult, Chief of Genito-Urinary Clinic in the Washington University Medical School, makes the following statement regarding catheterization of the ureters. "There are a few who still believe the catheterization of the ureters is a major procedure, attended with a great deal of traumatism and shock. I am unable to understand why the idea prevails, for the procedure itself is certainly simple, and attended with very little pain, seldom more than accompanies any instrumentation, and rarely necessitating even a local anesthetic."

Personally I know this to be true, for in over five hundred cystoscopies in the past two years I have but a very few times used a local anesthetic. These were in male cases of bladder papilloma, which demanded comparatively long sittings for fulgeration with the Oudin current electrode. Of course this is absolutely dependent on the class of cases and the individual patient. I simply bring this in to show how minor a procedure it should be, from the standpoint of additional shock to the patient.

The clinical course of these two types differs only in the severity of the symptoms. Both are of rapid onset; both may be ushered in with chills, nausea and vomiting. The rapid development of high temperature, quick pulse, and profound toxemia is found and maintained to a certain degree. The blood shows an early high leucocyto-

sis with a predominance of polyneuclear cells. Blood culture is usually negative. Organisms may be recovered from the urine in a majority of cases, but there is no proof that they are the specific invaders. The differentiation of the two types depends chiefly upon the degree of toxemia. Where the infection is of pyogenic origin the case usually grows rapidly worse, in spite of all palliative measures. Having already established the diagnosis, a case of this type leaves but one avenue of escape from fatality. Surgical interruption and nephrectomy give brilliant results.

When the infection is of the colon bacillus type, the toxemia, while alarming, is not progressively increasing. The temperature maintains a more level curve, and drops by lysis similar to the typhoid type, as the case recovers.

The treatment of these conditions is palliative up to the point where surgical interruption seems wisest. Elimination is promoted by the usual measures, and the patient kept quiet by opiates, if necessary. Heat to the affected parts has been more gratifying to the patient than cold in my experience. Their relative value in these cases is overshadowed by the comfort afforded. I used hexamethelamine with acid sodium phosphate with apparently good results. I am a firm believer in pushing a drug to the point of tolerance for its therapeutic effect. I can conceive of no reason for minimum dosage where the effect is known. To get results, hexamethalinetetramine must have an acid medium for formalin liberation. Therefore the urine must be acid. This is essential. To acidify an alkaline urine, acid sodium phosphate (not the ordinary drug of common use) gives the best results. It should be administered in 20-grain doses in solution with the addition of a small amount of sugar. This makes an agreeable combination to the patient, and should be given four hourly, two hours after the hexamethaline is given.

Hexamethaline is given in separate solution, 15 grains every four hours. Solution is passed from the stomach much more rapidly than the tablet. This is of value in giving such a drug as hexamethaline, because the acidity of the gastric juice of necessity liberates a certain percentage of the formalin, a fact which has caused some observers to advise that the drug be given in keratin-coated tablets or capsules.

In this dosage the laboratory findings have shown that formalin in sufficient quantity to render the urine slightly antiseptic is liberated in the urine. A less dosage is usually inefficient; a larger dosage may produce a persistent, low-grade inflammation by its irritating properties, which may prove baffling to the physician and is often attributed to other causes. Some claim that there may result an irri-

tation of the kidney cells. I have never seen a case result where this technique has been followed and the period of administration limited to a few weeks.

Formalin in the urine may be detected by the following simple laboratory test, and results checked up accurately :

TEST FOR FORMALIN IN URINE.

Solution A—Sodium nitro prusside, gm. 5 ; water, 100.

Solution B—Phenyl hydrazine hydrochloride, gm. $\frac{1}{2}$; water, 100.

Solution C—Sodium hydroxide, gm. 20 ; water, 100.

Technique—To 10 cc. of urine add 3 drops of solution A ; 3 drops of solution B. Shake well and add 3 drops of solution C.

Color, greenish blue, fading to reddish brown, is positive formalin.

Following are four case histories from a series of five cases which I followed minutely. They point out the chief features of this class of cases and show the usual clinical course and laboratory findings of renal infections of this type.

CASE No. 1.—Miss B., school-teacher, aged 28, taken suddenly with abdominal pain, nausea and vomiting. Provisional diagnosis of acute appendicitis was made, and consultation advised by the family physician. I saw the case with another genito-urinary surgeon and a general surgeon of some note who had been called in by the attending physician. Family history negative. Past history, had had tonsillar infections every year for the past ten years—had the tonsils removed the previous month. Present history, has not recuperated from the tonsillectomy as rapidly as was expected, and four days ago was taken suddenly as above stated. Physical examination: Patient is a small, thin, anemic woman. Abdomen gives spasm of the rectus on palpation of McBurney's Point. Tenderness extends into the upper quadrant with tenderness at the costo-vertebral angle. Temperature is of the septic type, reaching 103 degrees ; blood count 26,000 whites, 80% polynuclear, and 4,700,000 reds. Blood culture positive pneumococcus. Widal reaction negative. Urine, albumen positive, some pus and epithelium. The case was discussed in consultation, and the prevailing opinion of the surgeon and physician were that the appendix was involved. The suggestion that the ureters be catheterized was not met with approval by either medical man on the ground that it would add shock and that the urine was not sufficiently pathological to warrant suspecting the kidney. Operation was postponed until the next day in order for relatives to arrive on the scene. That night the case grew rapidly worse. The temperature reached 105, pulse became rapid and thready, and the patient died at 2.00 A. M. the

next morning. Post-mortem examination showed the kidney low down in the region of the pelvis and riddled with small miliary abscesses, from which both streptococci and pneumococci were recovered. The appendix was normal.

CASE No. 2.—Mrs. B., aged 24, married and two children. Three years ago was divorced from her husband. Six weeks ago was married again, and two weeks afterward developed a severe tonsillitis, which cleared up very slowly. Six days ago developed the present condition, which was pronounced typhoid pneumonia by the family physician. The husband was very anxious about the wife's condition and asked Dr. B. to allow one of the staff physicians to see the case. I was detailed by the surgeon to do the honors. I found a very sick patient, complaining of frequent urination, and pain and soreness in the left abdomen and back. There was marked tenderness in the costo-vertebral angle, and spasm of the rectus muscle on palpation. At my suggestion she was removed to the women's ward of the military hospital, where further examination gave the following information: Physical examination negative, except as above stated. Temperature 102; pulse 98; blood pressure, systolic 128, diastolic 105; blood count, white cells 24,000; polynuclears 80%, red cells 4,000,000; X-ray plate negative; blood culture negative; widal reaction negative; urine, albumen and some pus. Cystoscopy and uretal catheterization brought out the following, the right kidney freely secreting a normal urine, phenaltharlein appearing in eight minutes, the left kidney secreting a very slight amount of dark urine. There was sufficient albumen to coagulate the specimen when heated and some pus was present. Phenaltharlein did not appear at the end of fifteen minutes. The bladder showed several areas of inflammation. The pelves were washed out with argerol solution and the patient put on acid sodium phosphate and hexamethaline, and returned to bed for absolute rest and restricted diet. The condition went on for two days without apparent change. On the third morning the temperature jumped to 104.2, and the pulse to 130. The patient became very restless, and I feared we had postponed operation too long. On re-examining the heart I found a pronounced murmur, heard best at the apex, synchronous with the systole, had developed. The blood pressure had dropped to systolic 95 and diastolic 60. We decided that operation would result fatally and with ice bag to the heart and morphia awaited the outcome. Kind Providence came to our aid, and at the end of the third day the pulse had dropped to 98, and the blood pressure went back to normal. The murmur cleared up, but the temperature remained about 100 and dropped slowly by lysis as the case improved. At the end of the third week the cysto-

scopic findings were nearly normal except the phenaltharlin output of the affected side was somewhat retarded. The patient was sent home and had had no further trouble up to six months ago, when I lost track of the case.

CASE No. 3.—Mrs. D., aged 36, housewife, married and two children. Family history negative. Past history, several attacks of tonsillitis in younger days. In second pregnancy, two years ago, had long sickness which the doctor called childbirth fever, and had had leucorrhea ever since. Bothered with rheumatism at times. Physical examination showed the following: Chest and extremities negative; abdomen tender on the left side, extending backward to the loin, and marked spasm of the lumbar muscles. Patient had temperature of 101 and pulse of 100 while in the office. She was sent to the hospital. Blood showed 21,000 white cells. Blood culture negative. Urine showed much albumen and some pus. Condition grew worse, temperature went to 104, pulse 120, and operation was advised. Left kidney was removed under gas anesthetic; perinephric tissues were edematous, and a cortical abscess was ruptured while delivering the kidney. No attempt was made to ligate the pedicle and the clamps were left in place with ample drainage. The post-operative siege was stormy, but on the third day improvement was noted, and the clamps were removed on the seventh. Nothing of note occurred, and the patient left the hospital at the end of the third week.

CASE No. 4.—M. R., aged 46, salesman, referred by family physician, who thought the condition of the prostate warranted a thorough examination. Family history negative. Past history, children's diseases and typhoid—always been well. Present condition, for the last few months had had trouble about sleeping, which he thought could be traced to a slight frequency of urination at night. Was not sure that the frequency caused the insomnia or was the result of the condition. Had lost about 15 pounds and was very nervous. His appetite was poor and food distressed him. He tried tonics of various kinds which had not helped him. Consulted his family physician, who told him he had beginning prostatic trouble and advised him to see a specialist. Physical examination showed a well-nourished man of middle age, chest and abdomen negative; blood pressure, systolic 155, diastolic 100; prostate was slightly enlarged on rectal palpation; urine showed a few white cells—there was $\frac{1}{2}$ ounce residual. Patient was sent to the hospital for cystoscopic examination. The next morning was not feeling equal to the examination, which was deferred. That night had a slight chill and vomited. Urethral fever was suspected, as the patient had been catheter-

ized during examination. The condition did not clear up, and tenderness in the lumbar region developed. Blood count showed 18,000 whites. Blood culture negative. Urine showed albumen and some pus. Temperature was 102.3 and patient showed toxic absorption. Cystoscopy was done and the ureters catheterized. The right kidney was apparently normal. The left showed diminution in the amount of urine secreted: phenalthlein did not appear in 15 minutes. The pelves were washed out with argerol solution, and the patient returned to bed. The urine from the diseased kidney showed a large amount of albumen and a few red and white blood cells. The colon bacillus was recovered by urine culture. The patient was put on hexametheline and acid sodium phosphate and kept quiet. The customary hygienic measures were religiously followed. The temperature remained about the same for a week and then slowly dropped and the condition apparently took care of itself. At the end of three weeks the case went home. I don't know what happened to the prostate.

In conclusion, I would *first* repeat the apparent relation to the common entry of infection, the tonsils. This is not invariable, for authorities claim to have traced cases to such common infections as furuncles and even paronychia.

Secondly, I would call attention to that most expédient method of establishing a definite diagnosis, where there is the least suspicion of renal involvement, namely, urethral catheterization. Its results are positive. It is like finding the tubercle bacillus in a pathological specimen. It leaves no room for imaginative diagnosis.

Thirdly, I would point out the definite relation between costo-vertebral tenderness and renal infection. It is the McBurney Point of the urologist.

Fourthly, I would urge that the bladder specimen of urine be disregarded when the findings are negative, in the manner we disregard the negative tubercular smear of sputum from a suspicious case. Positive findings alone make a positive diagnosis.

And last, I wish to state that, the diagnosis having been established, the line between palliative measures and surgical interruption must lie within the best judgment of the physician from a careful study of the laboratory findings and the clinical aspect of the case.

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Necrology.

DR. DANIEL HENNESSY,

Bangor, 1836-1916.

Twenty-five years ago, when there were no specialists in diseases of the eye and ear in the northern part of Maine, I used to visit Bangor often to see patients of this sort, and during my visits there I became well acquainted with Dr. Hennessy, who has so lately passed on to his reward. He was always so kind to me and gave me so many handsome recommendations that I never failed to make him a call of thanks from time to time. Then in his office, with himself seated next beside me, and his wife and large and growing family around us, many a pleasant hour was genially spent. In remembrance, then, of his former kindnesses, let me say here a few words concerning his quiet, unostentatious, yet none the less beneficent and effective career in internal medicine in Bangor. Born in Bandin, County Cork, Ireland, on Christmas Day, 1836, Daniel Hennessy was brought to Melrose, New Brunswick, as an infant member of an Irish colony, emigrating on account of the famine. At the proper age he studied with an Irish schoolmaster, Gilbert Wall, next at Mt. Allison Seminary, and was graduated at St. Dunstan's College, Charlottetown, Prince Edward Island, one of his classmates being James Jeffry Roche, long time the editor of the "Boston Pilot." He obtained his medical degree at the Geneva (now University of Syracuse) Medical School in 1866, obtained much practical knowledge of medicine and surgery for nearly two years in the De Camp Military Hospital on David's Island, New York, as well as at the Eye Infirmary and Lying-In Hospital in New York City.

He began the practice of medicine at Point De Butte, New Brunswick, not far from Melrose, married Miss Alessandra Bliss, of Mt. Whately, and remained in that narrow field of practice for about four years. Having decided to practice in this country, and with Providence, Rhode Island, as an excellent location in view, he happened to stop over in Bangor, found an opening for practice and established himself in that city September 10, 1874. He died, as will be noticed, on the forty-second anniversary of his settlement in Bangor.

Dr. Hennessy soon obtained a paying practice, became, in turn, a member of the county, state and American medical societies, but

remained throughout his long and active career a most quiet, unassuming, reserved and retiring practitioner of medicine, doing also much charitable work in an invisible way. At his own fireside he was a man fertile in conversation with his friends, but never said much, if anything, publicly concerning his life or his career. He enjoyed the best of results with his numerous clientage, but it is not recalled that he ever spoke much in public or wrote for publication any essays to recall to memory the valued work for health that he had accomplished. Remaining in perfect health for many a year, age at last began to tell upon his powerful frame, and for several weeks before his death he suffered much, but at last obtained relief at the age of seventy-nine years and nine months.

J. A. S.

DR. LOUIS HORNBY.

Presque Isle, 1873-1916.

Dr. Hornby, who had been practicing in Presque Isle for the past six years, was officially a member of the Maine Medical Association, but close inquiries in many directions fail to bring to the surface for publication anything but the merest fragments of his medical life. I find that he died suddenly at his home, on the 23rd of July past, at the age of forty-three, and that he was graduated at the Boston College of Physicians and Surgeons in 1910. He was a member of the county and state associations, but kept very much to himself, so that very little is known of his life, either prior to his graduation in medicine, at the age of 36, or of his work in medicine after obtaining his degree. Regretting our inability to obtain more details concerning a worthy deceased member, this much may suffice for a very imperfect notice of his medical career in Maine.

J. A. S.

DR. HUGH FELIX QUINN,

Bangor, 1879-1916.

This clever young practitioner of medicine, not long a member of the association, died at his home in Bangor, on Saturday, April 29, 1916, after a long enduring chronic Bright's disease. He was sincerely admired for his skill in bacteriology, and regretted as a promising physician.

Dr. Quinn was the son of the late Felix and Sarah E. Quinn, of Bangor, was born in that city, June 27, 1879, studied in the public schools and obtained his academic degree at Bowdoin in the class of 1901. He soon took a position of trust in the Eastern Trust and Banking Company of Bangor for two years, and then began his studies in the Medical School of Maine. At the end of another two years he was offered a position in the State Bacteriologist's office, where he spent the better part of four years, becoming very skillful in the technique appertaining to that position. After resigning from there in 1908, he continued his studies at the Bowdoin Medical School, and obtained his medical degree in 1909. He then returned to the State Laboratory of Hygiene, and continued therein until finally opening an office for practice in Bangor in 1912. Once established in practice he was an active member of the county, state and American medical societies, was milk inspector of Bangor, and progressed steadily in medicine until attacked by his fatal illness in the end of the year 1915. Dr. Quinn was a promising young physician, cut off too early in his career to give him a chance to prove his real abilities.

J. A. S.

DR. ROLAND SUMNER GOVE,

1870-1916.

Dr. Gove, a well known practitioner of medicine and surgery in Sanford, Me., was stricken with pneumonia about the 10th of December, and died on the 19th of that month, in spite of all that attending physicians and surgeons could advise or administer. His death was a serious event in Sanford, where he was well known, highly respected and universally esteemed for his gracious ways in practical medicine.

The career of this late member of our association was as brief as it was useful in the two communities in which he passed his life, Biddeford and Sanford. Born in Limington, April 2, 1870, the son of Almon and Jennie Tarbox Gove, he was educated in the academy in his native place, and obtained his medical degree at the Medical School of Maine in 1892. He was a studious man and as such esteemed by his teachers and fellow-students alike. He practiced at once in Biddeford, and remained there until 1895, when he removed to Sanford for the rest of his life. He was capable and skillful throughout his term of active practice. He married, while in Biddeford, Miss Suzelle Welch, of that city, and is survived by her.

J. A. S.

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*Editorial Comment.**Wax, Paraffin and Resin for Burns (Ambrin).*

The persistence of the Germans in burning their French adversaries with boiling tar, producing frightful injuries to the skin, amongst others, has caused French ingenuity to try to discover a remedy which shall act quickly to diminish the terrible pain so produced. Dr. de Sanford, near Paris, has discovered that with a mixture of the above substances, which when heated to 120° Fahrenheit results in a liquid flowing along like pure honey from the honeycomb, he has obtained the desired remedy. The application is of the simplest, the surgeon merely sterilizing the burn, heating the mixture to the desired temperature and pouring it all over the surface afflicted, where in a second or less it forms an impalpable air-tight delicate covering, and reduces the previous agonizing pain to a minimum. In one second you are suffering the agonizing pain of a burn, in another you feel exquisite relief. The new compound is called Ambrin, but unfortunately the precise amount of the different ingredients is not mentioned in a letter from which this account has been obtained. Probably the ingredients are mixed of equal weight; if not, the precise amounts can be quickly determined.

Ambrin can also be applied by a spray apparatus or by a brush. It can be removed in a few hours, if necessary from contractions of the tissues following its application, or it may remain for twenty-four hours and then applied again, as before. The new application, it may be added, in conclusion, is transparent and thus enables the surgeon to see precisely how the burn is progressing.

J. A. S.

High Cost of Atropin Sulphate: Economy in Its Use Imperative.

How many specialists in eye diseases of to-day know that the price of atropin sulphate, as daily prescribed by them, is at present quotations about \$75 for a single ounce? In other words, each grain costs about 17 cents. The result is that to prescribe for a four-grain solution in one ounce of water, by no means a very strong solution in daily practice, means 68 cents actual wholesale cost, to say nothing of the price of the bottle, cork, label and time spent in making the solution properly and in filtering it.

Those who are prescribing atropin in their practice should inform their patients of its very high cost, tell them how necessary and valuable a remedy it is for their eye disease, suggest to them to use it economically, and for their own part prescribe for smaller amounts to be compounded by the druggists. A solution of one grain in two drachms of water is just as useful as one of four grains in an ounce of water, for they are of precisely the same strength. But with ordinary care of most inflammations of the eye, the lesser solution would carry the patient a long way toward recovery. Direct drop by drop doses, insist that one drop is as good in an eye as half a dozen, and never forget how much waste we have personally brought about in prescribing ounce solutions of atropin, more than half of which has occasion later to be thrown away, wasted, or kept about the house a possible poisonous drug or harmful to the eye if used improperly without a physician's directions.

The cause of the present high price of atropin lies not in any patent, but in the fact that the belladonna herbs raised in England are said to be better for the production of the alkaloid than that which grows right here at home. This is, however, a serious mistake, for American belladonna is as good as that imported. But the cry of the impossibility of importing the "best English" herb is utilized as a means of raising the price of the alkaloid unreasonably. Atropin is so indispensable in practice that some way should be found to bring down the artificial price.

J. A. S.

Emetine Dangerous to the Eyes.

Dr. Blue, of Memphis, warns against the dangers to the eyes from solutions of Emetine. He has seen very severe reaction following this accident, in two instances. Personally, we have observed two instances in Portland, in one of which the irritation persisted despite

careful treatment, for nearly two weeks, the eyes being incapable of ordinary work during most of that period.

In the rush for new remedies, care should be taken lest they produce unexpected accidents.

Compulsory Accident Insurance for Defectives: A War Instance.

I have for years advocated compulsory insurance against accidents to defectives, by whom I mean the deaf, for one sort of people. The insurance corporations, bent on money-saving and money-making, will pay no attention to papers of this sort. It is probable that in time they will understand that those who are defective take greater care of themselves, protect themselves more carefully against accidents than those with good ears, and are by no means to be despised as money-earners for corporations insuring against accidents. Certainly they are better risks than those with but one useful eye, or those whose field of vision is impaired, or those who are very lame, and can only move with difficulty from approaching danger, which they can see and hear perfectly.

One proof of the declaration that the deaf are by no means greater accident insurance risks than ordinary is offered by the experiences of the war in French ammunition and aeroplane factory employees, for when France had need to send to the front all of its available men, many deaf mutes were left unemployed, and it was a question how to utilize their undeniable strength. The insurance corporations insisted that the risk of employing them was too great, on account of possible accidents, and the instructors objected because they could not be taught. Republican necessity, however, compelled the utilization of all deaf mutes in France, with the result that their powers of receiving instruction by signs have produced for France ammunition and aeroplanes as perfect as those made by men or women who could speak, while the percentage of accidents of every possible sort amongst deaf mutes, men and women alike, as employed by the war is less than that amongst those with perfect speech and hearing, because, as I have repeatedly insisted, their powers of watchfulness are greater than those with ears that are good to hear with.

The recent report of the Minister of Armament of France makes interesting reading to those who care for accuracy of observation of the occurrence of accidents amongst workmen.

J. A. S.

Salvarsan and Some Substitutes.

At a time when medical attention is attracted more than ever to the treatment of syphilis, owing to its increase amongst the armies of the world, it is well worth our while to consider the advisability of utilizing the best remedies for its possible cure. For some years past, Salvarsan has occupied a field quite of its own, but in many an instance it has done more harm than good. Skill is imperative in using it so as not to endanger the patient. The intravenous injection is not without its risks, and intramuscular leaves behind it abscesses and nodular induration, and the intraspinal use seems *ultra vires* to most of us. Moreover, in this era of bitter international feeling, the fact should be emphasized that Salvarsan is by no means the only syphilitic panacea in the world, that it is a patented synthetic compound, that such a patent increases its cost to an almost prohibitive degree, while finally the question of allowing a patent at all to a material made outside of our country looms large in the medical eye in these days.

For these and other reasons, we are now asked by circulars from prominent physicians to write to our Senators and Representatives in Congress to abrogate the patent protecting Salvarsan, for the benefit of the nation at large. Perhaps this would be wise, although it might not be possible to obtain against a powerful lobby. Would the abrogation cheapen the cost? Would not the passage of such a law be preceded by insiders buying up the visible supply and placing the price where they pleased? If abrogation decreased the price, would it increase the benefit of the compound?

With such thoughts in mind, the idea suggests itself that it is time to utilize the English and French substitutes for Salvarsan, Kharsivan, Arsenobenzol and Novarsenobenzol, and to compare our results obtained with those arising after the use of Salvarsan.

All of these synthetic compounds are now being used in the allied armies, all of them promise excellent therapeutical values, all of them have been experimentally proved the equal of the old compound. One set of observers has equal right to authority with another, and it is full time that, wherever possible, trial should be made of these not only promising, but actually demonstrated, remedies of value in syphilis in all its forms.

Chemistry is not guess work, it does not depend on the weather or the climate, a synthetic product is not a mere herb which varies season after season in roots, branches, flowers and fruits, but it is a compound of so many atoms, resulting from a fixed process. Ingenious men of England and France have produced new synthetic compounds, and stamped them with their approval as of promise against

syphilis. Why not give, then, to Kharvisan, to Arsenobenzol and to Movarsenobenzol a chance to compete with Salvarsan, and let that compound soar like an aeroplane to heights still loftier than its present dizzy altitude, until it falls to a proper level of cost without a patented parachute to keep the wind within it, to save it from falling to bed rock prices.

J. A. S.

Acetomorphine or Heroin. What Is in a Name?

It is curious, as you go through the world of medicine, to see how one man with a name that people can easily catch hold of makes a practice at once, and ends in accumulating money if he has any gift at savings, while another man, with even greater skill than the first one, makes a dead failure in life, because people cannot remember his name. So, too, it is with things for sale, or motor cars, or books, the one with the quick-to-catch-and-to-remember name outstrips the one with the name that is hard to think of. Such meditation arises when we think of the different fates of two precisely similar drugs, acetomorphine and heroin. Acetomorphine, invented in England, and found exceedingly useful in coughs and in the treatment of affections of the bronchial mucous membrane, fell flat on the market and in medicinal use, while heroin, precisely the same synthetic compound, made in precisely the same manner, in every possible respect met with a very flattering reception and has continued to deserve the recommendation and appreciation of the medical world. Acetomorphine was invented and put before the world by a genuine hard-headed, skillful Scotchman. Heroin came from Germany.

As we said in the beginning of this note, it is odd how much there is in a name!

J. A. S.

Book Reviews.

Post-Mortem Examinations.

By William S. Wardsworth, M. D., Philadelphia. W. B. Saunders Company.

An interesting treatise dealing with the steps in detail for the gross examination of the dead body.

Attention is specially given to the instruments and technic which the author has found to be most serviceable, both in labor and time. The chapters devoted to the opening and the examination of the thoracic and abdominal cavities are especially interesting and instructive, for they emphasize the fact, that is often overlooked, that changes may be produced by the steps taken in the examination, unless due care is observed, which may be laid to other causes.

The whole subject is given in a clear-cut manner, and is also profusely illustrated and should prove of value to those who are called upon to do post-mortem work at infrequent intervals.

Notices.

The National Committee for Mental Hygiene has created a sub-committee on furnishing hospital units for nervous and mental disorders to the United States Government, the project having been approved by Surgeon General W. C. Gorgas, of the U. S. Army.

This sub-committee, of which Dr. Pearce Bailey, of New York, is chairman, is authorized to secure the services of alienists and neurologists to be commissioned in the Officers' Reserve Corps, Medical Section, and to serve in the neuro-psychiatric units which are to be attached to the base and other hospitals of the military services of the United States. Further information will be given, and application forms sent to physicians qualified in this branch of medicine, on application by letter or in person to The National Committee for Mental Hygiene, 50 Union Square, New York City.

County News and Notes.

ANDROSCOGGIN.

ANDROSCOGGIN COUNTY MEDICAL SOCIETY.

The Androscoggin County Medical Society held its regular meeting June 5th. Dr. J. A. Bennett, formerly of Sangerville, Me., and now of Lewiston, was transferred from Piscataquis County society to Androscoggin.

Dr. J. J. Pelletier, of Lewiston, was elected to membership.

The society listened with much pleasure to Dr. _____, of Boston, Mass., who gave a paper on "Gastric and Duodenal Ulcer."

President Sawyer announced that meetings will be suspended during the summer months.

Meeting adjourned.

L. F. HALL, *Secretary.*

AROOSTOOK.

AROOSTOOK COUNTY MEDICAL SOCIETY.

The semi-annual meeting of Aroostook County Medical Society was held May 29th, in Houlton. At the business meeting Dr. Parker M. Ward was elected President, Dr. Kalloch, of Fort Fairfield, Secretary.

At the morning session, Dr. Graves, of Presque Isle, read a paper on his experiences while a member of an English Ambulance Corps, last year. A dinner was served at Mercier's.

In the afternoon the members of the society attended a meeting of the local Red Cross at Watson Hall. Dr. William L. Cousins, who is recruiting an ambulance unit from Maine, made some most interesting remarks on the work he is engaged in. Six doctors are wanted from Aroostook County for this unit.

Judge Madigan spoke of the seriousness of the war and the grave-ness of the present situation.

The visiting doctors were entertained by local physicians at the Red Cross supper.

Among those present were Drs. Sincock and Thomas, of Caribou; Boone, Bennett and Graves, of Presque Isle; Sawyer, Chamberlain, Kalloch and Hutchings, of Fort Fairfield; Haggerthy, of Ashland; Johnson and Fulton, of Mars Hill; Hill, of Monticello; Bigelow, of Island Falls; Tarbell, of Smyrna Mills; Upham, of Sherman; and Ebbett, of Hodgdon.

SAGADAHOC.

SAGADAHOC COUNTY DAUGHTERS OF HYGIEIA.

The fourth quarterly meeting of the Sagadahoc County Daughters of Hygieia was held at the Colonial Cafe, Bath, Wednesday evening, April 25th.

Those present were: Mrs. Josie Irish, Bowdoinham; Mrs. W. N. Price, Richmond; Mrs. Annie Leathers, Wiscasset; Mrs. A. F. Williams, Phippsburg; Mrs. Ethel Kershner, Mrs. R. H. Hannigan, Mrs. Christine Snipe, Mrs. Annie Mullin, Mrs. Mildred Barker, Mrs. Frances Peaslee, Bath.

The guests of the evening were Mrs. F. N. Whittier, of Brunswick, and Mrs. W. T. Stinson, of Bath.

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A banquet was served at 8 o'clock.

Mrs. Kershner, President, presided at the business meeting. Mrs. Mullin was appointed Entertainment Committee for the next meeting, and Mrs. Williams, Program Committee.

Mrs. Winona Tilton Stinson, State Secretary of the National League for Woman's Service, talked to the ladies for over an hour on the work of the National League.

The meeting adjourned at 11.00 o'clock.

FRANCES H. PEASLEE, *Sec.*

Personal News and Notes.

Dr. F. C. Lord, formerly of Kennebunk, opened an office last month in the Masonic Building, Biddeford, for the treatment of diseases of the eye, ear, nose and throat.

Dr. David E. Dolloff and Dr. Paul S. Hill, of Biddeford, started May 29th for Fort Benjamin Harrison, Indiana, where they are attached to the medical service of the Reserve Officers' Corps of the United States Army.

Dr. W. L. Haskell has announced the closure of his office July 1, when he will take up his military duties in the Coast Artillery Service.

Dr. E. F. Pierce, Lewiston, a member of the Androscoggin County Medi-

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cal Society, served on the Registration Committee for draft for Androscoggin County.

Dr. J. A. Bennett, formerly of Sangerville, Me., has opened an office on College St., Lewiston.

Dr. Albion E. Floyd, Mapleton, has taken examination for enlistment in the United States Army Medical Corps.

DR. H. W. HALL
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Dr. Kershner, of Bath, received orders and has reported for duty, being stationed in one of our eastern fortifications.

Dr. R. V. N. Bliss, Blue Hill, has reported for duty at Fort Benjamin Harrison, Indiana.

Dr. Frederick Hills, for the past seven years Superintendent of the Eastern Maine Hospital, has tendered his resignation to the Board of Trustees to take effect July 1, owing to the condition of his health.

Dr. Charles E. Cook, of South Berwick, is attached to Company Four M. O. R. C., at Fort Benjamin Harrison, Indiana.

Dr. Harrison J. Hunt, son of Dr. W. S. Hunt, of Bangor, is expected home, having returned with the McMillan Arctic expedition.

Dr. A. W. Haskell, Portland, has been called to service and has reported to the training camp in Indiana.

Dr. Forest C. Tyson, Augusta, Superintendent of the Augusta State Hospital, has returned from a business trip to New York.

Dr. Edgar Flint, of Foxcroft, left for Fort Benjamin Harrison, Indianapolis, Ind., where he has been ordered for active service.

Dr. David Williams, of the National Home, left for Milwaukee, Wis.

Dr. E. S. Cummings, of Sabattus street, Lewiston, has received his commission as First Lieutenant in the Medical Reserve Corps, and in accordance with orders from Washington has left for Fort Benjamin Harrison, Indiana. Here Dr. Cummings will probably be stationed for the next eight weeks at the medical training camp.



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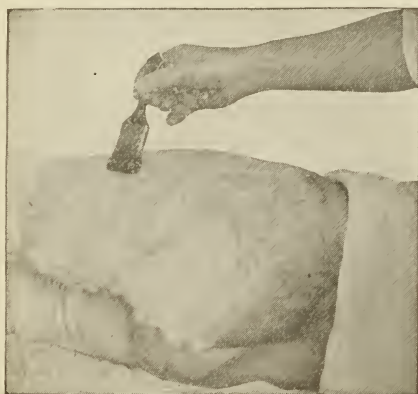
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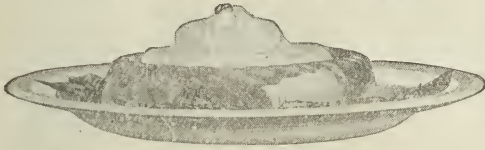
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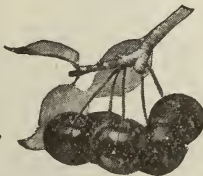


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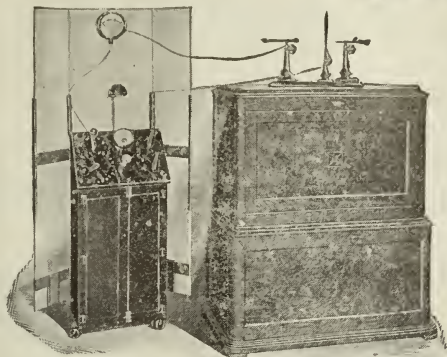
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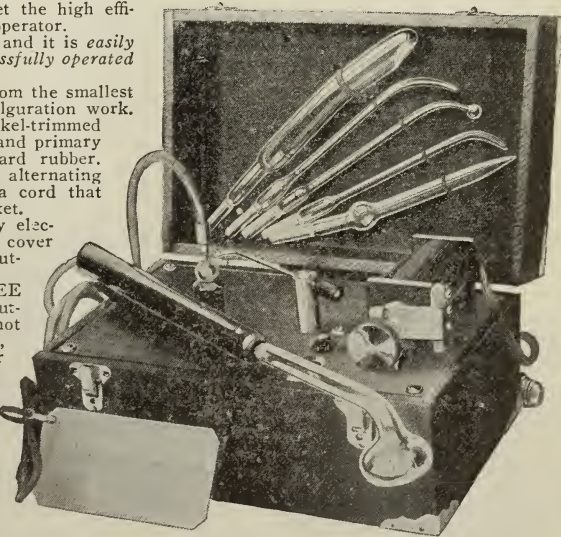
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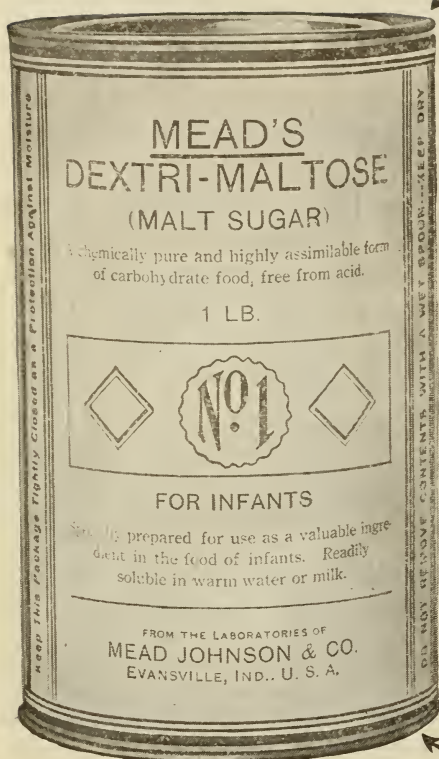
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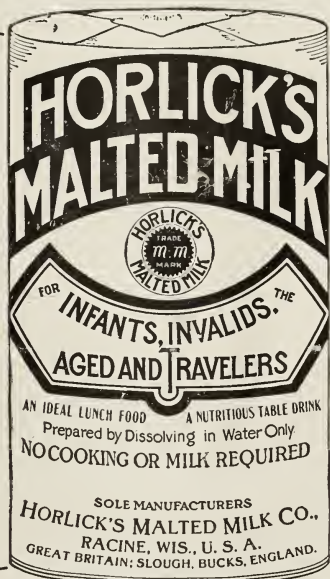
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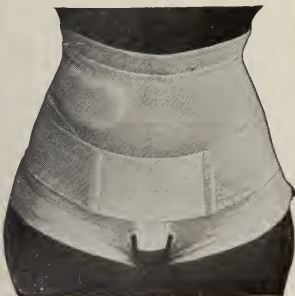
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JULY, 1917.

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TABLE OF CONTENTS

Original Articles—

Report of the Committee on Venereal
Diseases and their Prevention 359
Medical Defense against Malpractice
Suits 375

House of Delegates—

First Meeting, June 12, 1917..... 381
Second Meeting, June 13, 1917 396
Third Meeting, June 14, 1917..... 414
Fourth Meeting, June 14, 1917..... 420

General Meeting—

First Session, June 13, 1917 428
Second Session, June 13, 1917 429
Third Session, June 14, 1917 431

Miscellaneous—

Necrology..... 438
County News and Notes..... VI
Personal News and Notes VIII

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No. 12

REPORT OF THE COMMITTEE ON VENEREAL DISEASES AND THEIR PREVENTION.

PRESENTED JUNE 12, 1917.

Mr. President and Members of the House of Delegates:

During the past year your committee has received in individual contributions \$411.00; from the Maine Medical Association \$25.00; from the Prince A. Morrow Memorial Fund, established last year, \$72.00; interest on savings bank deposits \$5.57. The total receipts for the year amount to \$512.43. The balance on hand is \$342.13.

As last year, your committee has worked along the following lines:

1. Assisting in awakening the people of Maine to the dangers of venereal disease.
2. Assisting in some degree in establishing higher ideals of sexual morality.
3. Arousing parents to a sense of responsibility in regard to the sexual morals of their children.
4. Calling the attention of parents to the need of arousing in their developing boys and girls a feeling of responsibility in regard to the health and welfare of their future families.
5. Assisting in awakening public opinion to support officers of sanitation in applying modern hygienic methods to the control of venereal disease.

As a part of its educational campaign, your committee has written 41 letters to teachers and six letters to superintendents of schools. Letters and educational pamphlets have been sent to 176 parents of

boys. This number, added to 1,749 previously sent, makes 1,925 individual letters written to parents, according to the plan outlined in the report of the committee for 1913. As in previous years, the pamphlet sent to parents has been "The Boy's Venereal Peril" (B. V. P.), issued by the American Medical Association. The number of these pamphlets distributed in all ways during the year was 428. Since the committee began its work it has distributed more than 4,600 of these little booklets.

For the development of public opinion and the securing of funds, the committee has sent individual letters with literature as follows: 39 to physicians; 29 to clergymen; 37 to business men; nine to lawyers; four to Y. M. C. A. officers; four to W. C. T. U. officers; and three to Grange officers.

To keep in touch with the work for the prevention of venereal diseases in other parts of the country, to answer inquiries in regard to the work of our committee, and for explaining the purpose of the work, letters with literature were sent out as follows: 25 to boards, associations, and societies; four to dispensaries and hospitals; four to Federal Government officials; 25 to state officials; and one to a city official.

During the summer of 1916, in accordance with a plan suggested by the American Social Hygiene Association, Inc., and with the co-operation of Adjutant General George McL. Presson, the committee sent educational pamphlets to all of the officers and enlisted men of the 2nd Maine Infantry mobilized on the Mexican border. The pamphlet used was "Sexual Hygiene for Young Men," by William T. Belfield, M. D., and issued with the imprint of the committee by the American Social Hygiene Association, Inc. Each pamphlet was accompanied by an individual letter explaining the purpose of the pamphlet and urging a careful consideration of the facts presented. The number of these letters and pamphlets sent to the border was 1,039.

In regard to this work, the committee was much pleased to receive the following letter from Adjutant General George McL. Presson under date of May 28th, 1917:

"In reply to your letter of May 24th referring to the work of the Maine Medical Association on venereal diseases, I beg to state that I wish to congratulate you on the work that was done by your committee in the 2nd Maine Infantry while on the Mexican border. The results were something wonderful. When the 2nd Infantry was mustered out on its return from the border a physical examination showed that out of over one thousand men only four cases of venereal diseases were discovered. This I consider was partially, if not fully, due to the work of the committee of the Maine Medical Association, and I hope the people of this state will appreciate this valuable service that is being

done and that you will be able to raise funds to continue the work. It certainly has the approval of this department, and again I want to congratulate you on your wonderful success."

The same pamphlet and similar letters were sent to 110 officers and enlisted men of the Maine Coast Artillery Corps, the work then being temporarily discontinued on account of the many changes in the personnel of the Corps.

In regard to the work with the Maine troops, your committee received several letters of commendation from officers with assurances of coöperation by lectures to the enlisted men. No word of disapproval was received, although objections were invited in the letters sent out.

At the invitation of Dr. W. F. Snow, then General Secretary of the American Social Hygiene Association, Inc., a chart of copies of publications, typical letters, and other data relating to the work of the committee was included in the exhibit of actual work that is being carried on by various health departments and medical societies at the fall meeting of the American Public Health Association and the American Hospital Association. Also at the request of Dr. Snow, an article dealing with the work of your committee in Maine was prepared and published in the quarterly of the American Social Hygiene Association, Inc., for January, 1917.

At the Community-Efficiency Conference, held under the auspices of the State Young Men's Christian Association at Augusta, January 12, 13, and 14, 1917, the chairman of your committee presented a brief and a five-year program for the Uplift Forces of Maine for Fighting the Social Evil. The attention of the conference was called to the committee of the Maine Medical Association and an outline of its work since 1910 was given. Much interest was manifested in the work, and about 120 sets of educational pamphlets and reports of the committee were distributed.

During the session of the Maine Legislature this year the committee devoted much time and funds to securing the passage of a law to provide for the free laboratory diagnosis of syphilis by the Wassermann reaction, treatment of syphilis and gonorrhea at cost, and the reporting, care and segregation of cases of venereal diseases in charitable and correctional institutions. This work had the support of the State Board of Charities and Corrections and of the Children's Protective Society of Maine. The original draft of the bill was prepared by Mr. James F. Bagley, Secretary of the State Board of Charities and Corrections, and the bill was introduced by Senator Roscoe T. Holt, of Cumberland County. Among the speakers for the bill at the hearing

before the Committee on Public Health, to which the bill was referred by the Legislature, were Dr. A. G. Young, Secretary of the State Board of Health, Mrs. Maude Williams Smith, Agent of the Children's Protective Society of Maine, and Miss Gertrude L. MacDonald, Superintendent of the State School for Girls, all of whom did much to secure the passage of the new law. The chairman of your committee conducted the case for the proponents at the hearing.

In its work for this law, the committee sent 744 individual letters, with copies of the bill, to members of the Maine Medical Association. The matter was personally presented by the chairman to the members of the Cumberland County Medical Society and to many individual members of the state association. The Cumberland County Society unanimously endorsed the measure at its March meeting, and much aid was given by members of the state association throughout the state, a majority of the physicians of Maine being heartily in favor of the law. Nearly 200 individual letters, with reports and literature, were sent to members of the Legislature, and many enthusiastic replies and pledges of support were received. The aid of eighty daily and weekly newspapers of the State was asked, and many editorials of endorsement were published.

Your committee is much gratified to be able to report to the Association the successful passage of the law, which, it is believed, will have a far-reaching influence for good in Maine. A copy of the law as finally passed, and as will become effective on July 1st, is given below. The law was approved by the Governor April 7, 1917.

PUBLIC LAWS OF THE STATE OF MAINE.

CHAPTER 301.

"An Act additional to Chapter nineteen of the Revised Statutes, relating to care and treatment of certain infectious diseases.

"Section 1. Chapter nineteen of the Revised Statutes, is hereby amended by adding at the end of said chapter the following sections, namely:

"Section 125. It shall be the duty of every superintendent, manager or physician in charge of any state, county or municipal charitable or correctional institution immediately to report to the state board of health every case of venereal disease among the inmates of said institution of which he has knowledge. It shall be the duty of every superintendent, manager or physician in charge of any state-aided, county-aided, or municipally-aided charitable institution to make a similar report to the state board of health in relation to inmates of such

institution, the cost of whose care and treatment is being paid in whole or in part by the state, or by any county or municipality in the state. Said report shall be made in the form which may be required by the rules and regulations of the said state board, provided that such rules and regulations shall not require said reports to be made in a form which will disclose to the state board of health or to any other person, except the said superintendent, manager or physician, the identity of the inmate. Said superintendents, managers, and physicians shall comply with such rules and regulations as are made by the said state board to prevent the spread of venereal disease.

"Section 126. The reports to the state board of health prescribed by the preceding section shall be confidential, and shall not be accessible to the public nor shall such records and reports be deemed public records.

"Section 127. The state board of health shall provide at the state laboratory of hygiene or elsewhere, facilities for free bacteriological examination of discharges for the diagnosis of gonorrheal infections, and shall also provide at cost vaccine or antitoxin for the treatment of such infections. And said board shall make at the expense of the state the Wassermann test for the diagnosis of syphilis; and shall furnish the treatment known as Salvarsan or other accredited specific treatment at cost.

"Section 128. The state board of health shall include in bulletins and circulars distributed by it, information concerning the diseases covered by the preceding sections, provided that nothing shall be contained in such bulletins or circulars which will disclose the identity of the persons suffering from such venereal disease nor the identity of any state-aided, county-aided or municipally-aided charitable institution in which such persons are treated or cared for.

"Section 129. Any inmate of any state, county or municipal charitable or correctional institution, or any dependent child supported or partially supported by public funds, afflicted or suspected of being afflicted with venereal disease, shall forthwith be placed under medical treatment, and if in the opinion of the attending physician, it is necessary, shall be isolated until danger of contagion is passed. Such case shall be immediately reported to the state board of health in accordance with the latter's rules and regulations, provided that such rules and regulations shall not require information disclosing the identity of any dependent or delinquent child, and the rules and regulations of the state board of health for examination, testing and treatment of cases of venereal disease shall be faithfully observed. If the sentence or term

of commitment of an inmate to any such state, county or municipal charitable or correctional institution expires before such disease is cured, or if, in the opinion of the attending physician of the institution, or of such physician as the authorities thereof may consult, his discharge would be dangerous to the public health, he shall be continued under such medical treatment, care and custody until in the opinion of such physician his discharge will not endanger the public health. The expenses of his support and treatment shall be paid by the place in which he has a pauper settlement, or by the state if he has no pauper settlement, after notice of the expiration of his sentence and of his condition to the overseers of the poor of the city or town or plantation where he was residing at the time of his commitment to the institution.

"Section 130. Any official or person who shall wilfully fail, neglect or refuse to perform any of the duties imposed upon him by the provisions of this act shall be fined not more than five hundred dollars or be imprisoned for not more than six months.

"Section 131. For the purpose of enabling the state board of health to carry out the provisions of this act there is hereby appropriated for the year nineteen hundred seventeen the sum of four thousand dollars and for the year nineteen hundred eighteen, the sum of four thousand dollars. (Approved April 7, 1917)."

The committee has sent the Belfield pamphlet to 350 members of senior classes of high schools and academies of Maine, in the belief that such instruction will have a greater effect for good if the boys are reached before entering college or leaving school. Also it is believed that, as seniors, these boys will favorably influence the younger students who naturally look to them for example. Each pamphlet is accompanied by a personal letter asking a careful consideration of the truths set forth. The boys are also asked to consult their parents on any question of sex that may arise.

This year the lecture on "Sex Hygiene" given annually for several years to Bowdoin College students by Dr. Frederic H. Gerrish, Professor Emeritus of Surgery in the Bowdoin Medical School, has been published. From Bowdoin College the committee has been able to secure enough of these books to send a copy to each member of the Officers' Training Corps from that college now at Plattsburg and to present copies to the first year class of the Bowdoin Medical School.

The total number of letters sent out by the committee during the past year, including 40 miscellaneous letters, is about 2,975, or more than six times as many as last year.

The number of reports distributed during the year is 2115. Over 13,000 reports have been distributed since the work was undertaken by the committee. The number of Belfield pamphlets distributed during the year is more than 1,650, and the number of the Gerrish books is 75. Nearly 1,000 copies of the legislative bill providing for the control of venereal diseases in this state were sent out by the committee during the work for its passage. About 1,500 leaflets and reprints dealing with the social evil have been distributed.

The combined number of letters, reports, educational pamphlets, bills, and leaflets sent out during the past year is about 10,000, and more than 28,000 since the committee began its work.

During the year the committee was again registered and licensed to secure funds by the State Board of Charities and Corrections according to the laws of Maine.

ENDORSEMENT AND COMMENDATION.

Numerous letters of endorsement and commendation have been received by the committee. The following are extracts from some of the letters:

The American Medical Association, Frederick R. Green, M. D., Secretary, Council on Health and Public Instruction:

"I have read your letter of the 24th and the enclosed report with much interest. I had already read the report in your state journal and had admired the excellent work which your committee is doing. Surely such efforts must make a definite impression on the public mind.

"The work itself impresses me as most excellent and commendable."

American Public Health Association, Professor Selskar M. Gunn, Secretary:

"Your committee is certainly a live one and I feel sure that you must be doing a great deal of good. I am going to take the liberty of referring to your work in the Note Section of the *American Journal of Public Health*."

The New York Social Hygiene Society, Inc., Frank J. Osborne, Executive Secretary:

"It is easy to see from the general tone of your letter, as well as from the printed report, that yours is a committee far more active and useful in the dissemination of knowledge on this great subject than the majority of medical associations in this country. Your report goes far toward bringing the most recent advances in this subject which have taken place throughout the country to the attention of your readers, and, I am sure, does your committee marked credit not only as a valuable piece of present-day information but as a concise bit of reference material which may be used by busy workers in the future."

The Commonwealth of Massachusetts, State Department of Health, Walter H. Brown, Epidemiologist:

"Your letter of September 2, enclosing report of your committee, is at hand. I have read it with a great deal of interest and congratulate your committee upon the character of the work that you are doing along this important line.

"It might be of interest to know that the recent legislature appropriated \$10,000 for the manufacture or purchase of Salvarsan for free distribution."

State of Maine, Department of Agriculture, W. T. Guptill, Commissioner:

"I wish to say that I will only be too glad to coöperate and assist you in the work which you have outlined and described to me. This is something which is entirely new to me but you have my assistance to the fullest extent possible.

* * * Whatever I can do I shall do most readily.

"In diseases such as tuberculosis, cancer or any other venereal disease there is certainly an abhorrence to one more than to the others, and while I am not familiar in any detail with any of these diseases there appeals to my imagination a loathsomeness to venereal diseases that does not in the case of other diseases. I fully agree with your association that everything should be done that possibly can be done to eradicate these diseases. I am delighted to know that there is an organized effort to make a headway in controlling such things, even in some degree."

(June 14, 1916)

Robert H. Gardiner, Esq., Gardiner:

"I am more and more impressed with the overwhelming importance of this work. The evil which the committee is endeavoring so efficiently to eradicate is most serious, and, unless it can be checked, I fear that it will destroy the strength of our national life, as it has throughout the history of the world the life of many other nations."

(June 2, 1917)

"I enclose with great pleasure a check to help the admirable work you are doing to combat venereal disease. I mean to make this an annual subscription if you will be good enough to remind me each year."

Mr. C. H. Payson, Portland:

"I have read copy of the report which you sent me on the work you are undertaking, and enclose contribution check of \$50.

"Should there be a deficit at the end of the year you might recall the matter to my mind again."

President George C. Chase, Bates College:

"I thank you for the interesting report of your committee. I am glad that we have earnest and able specialists that are doing thorough work in bringing important information and advice to the educators of our state and to parents. I gladly enclose my check for your important work."

Professor Alice M. Boring, University of Maine:

"I am glad to repeat my former contribution toward the work of the Committee on Venereal Diseases of the Maine Medical Association. You are doing a good work."

Professor G. B. Franklin, Colby College:

"If you can spare a dozen copies of the pamphlet 'B. V. P.,' one among the several distributed by the Maine Medical Association at the Community-Efficiency Conference, I shall be grateful for them. The Colby students want to place one in each fraternity house and dormitory."

Bishop Benjamin Brewster, Portland:

"I thank you very heartily for sending me the pamphlets from your Committee on Venereal Diseases and their Prevention, and for your very full explanatory letter. I take pleasure in enclosing \$5.00 as my personal contribution, only regretting that it cannot be larger this year. I am deeply interested in this subject, and I congratulate Maine on having doctors who take such a progressive and scientific stand. I desire to coöperate in any way possible in the furtherance of your good work."

Rev. C. L. Waite, Woodfords:

"I know of few movements so necessary, or that promise so much good, as that which your committee has undertaken. I take pleasure in sending you a small contribution towards the circulation of these pamphlets ('B. V. P.') and will undertake finding good places in which to put twenty or fifty copies."

Rev. Carl N. Garland, Superintendent, East Maine Conference of the Methodist Episcopal Church, Rockland:

"I might say that your pamphlet was passed around among a great number of the young men in the high school, and, so far as I can gather, this, together with other information, has promoted a standard among a large group of the boys that is quite remarkable."

Rev. William Magwood, Vinalhaven:

"In reply to yours of recent date regarding results of the pamphlets 'B. V. P.' distributed by me during the past year, I can say that in most cases I gave the pamphlets to the fathers. I called a meeting of the fathers of the community, having boys over fourteen years old, at the church one Sunday afternoon, and gave them a talk on the subject and then gave out the pamphlets. The fathers appeared to be very grateful for the information given and for the pamphlets on the subject.

"My judgment is that much of the information in the pamphlets was as interesting and new to most of them as it would be helpful to their boys.

"I am glad to see the medical profession doing this kind of work. Prevention is better than cure, even though there is less profit in it, and I am sure this kind of work will commend itself to every right-thinking man in the State. Success to you!"

Dr. M. H. Bailey, Medical Adviser, Harvard University:

"You are pursuing a fine program and you have my best wishes for the continued activity and success of your organization."

Dr. V. T. Lathbury, Augusta :

"I have just been reading the report of your Committee on Venereal Diseases and am deeply impressed with the work you are trying to accomplish. Every medical man knows the great burden of physical and mental suffering that would be lifted from mankind if it were possible to eliminate venereal diseases, or even to appreciably decrease them.

"I am enclosing a small check and hope that I may be able to do more for this good cause later on."

Hon. F. H. Appleton, Bangor :

"On my return from Washington I found your letter of May 27th, and take great pleasure in renewing my subscription of last year. From every point of view I regard your work as most important for the youth of the nation, and wish you the largest measure of success."

EDUCATIONAL CAMPAIGN FOR TROOPS.

Major Clarence F. Kendall, Hospital Corps, Coast Artillery Corps, N. G. S. M., Biddeford :

"In regard to the pamphlet which you sent to me, I will say that I am going to take the subject up in my lectures to the different companies of the National Guard. I am much interested in this question, and will do all I can in this line."

Lieutenant Edward D. Johnson, Chaplain, Coast Artillery Corps, N. G. S. M., Brunswick :

"Again I want to thank you for a copy of the booklet distributed by the Medical Association and to express my warm interest in the steady campaign that is being carried on. I am glad to know that a copy has been sent to each member of the Coast Artillery Corps. In case we are sent to the Border, I shall certainly try to get from you enough copies to supply recruits whose names are not now on the rolls, and to see that each man has one."

Dr. Estes Nichols, Portland :

"Your work among the Maine Infantry and the Coast Artillery Corps will result in much good, especially in the way of prevention. There will be great need of the work of this committee during the period of the next few years, because of the mobilizing of so many young men into the service. Volunteer army life has always proven a fertile place for venereal diseases, and they always flourish among troops that have not been trained to the regular service."

IN REGARD TO THE STATE LAW.

Dr. George A. Phillips, Bar Harbor :

"My brother, Dr. J. D. Phillips, is in the House at Augusta and I have enclosed your letter to him. He remembers that I am the author of this move,

when I read the paper and asked for appointment of committee of which you are chairman. He will be interested, I know. If there is a hearing and I could help any I will come to Augusta."

Dr. F. C. Tyson, Superintendent, Augusta State Hospital:

"I am very glad to have an opportunity to help this good work along and I have this day written to several members of the Legislature, asking for their support.

"I wish to congratulate you, as a member of the Committee on Venereal Diseases and their Prevention, for the good work you are doing."

Dr. G. H. Coombs, Waldoboro:

"I have written to those whom I know, urging support of Document No. 246. Very glad to do it."

Dr. W. L. Hunt, Bangor:

"If there is any doubt about the venereal bill No. 246, I would like to come over to the hearing. It is quite necessary to have the bill passed. I suppose you have men at work on it and I have written to a few."

Dr. C. W. Bray, Portland:

"I assure you I will gladly do all that I can to aid you in this the work you have undertaken."

Dr. James A. Spalding, Portland:

"It will be a great pleasure for me to write to a member or two of the Legislature concerning the merits of the proposed law against syphilis. The mere fact that syphilis is a reportable disease would keep many young men from taking the risks with prostitutes. I will do what I can for the good cause."

Hon. George W. Norton, Editor, *Portland Evening Express*:

"I will take up the subject matter of your recent note with our chief editorial writer this morning. We will be very glad to assist you in this manner, also, if I can do so, at Augusta."

Representative Charles E. Gurney, Portland:

"I shall be very glad to lend what support I may be able to the passage of this very desirable measure. The facts you bring to our attention are astounding. I had no conception that the situation was so serious as is set out in the literature mailed the members of the Legislature."

Representative Theodore W. Longley, Sidney:

"I will look up Senate Doc. No. 246 very carefully and I presume it will receive my full support in the House.

"Glad to know that you are still in the fight for better conditions in Maine and only wish we had more like you."

Representative Perley T. Howard, Woodland:

"Think it is a good bill and will do everything to support it."

Senator Leon F. Higgins, Brewer:

"It will give me pleasure to assist in the passage of this bill."

Representative Percival P. Baxter, Portland:

"Shall of course do all I can to help your bill and I am glad that you wrote me about it. I shall certainly give it my cordial support."

Representative John L. Meserve, Naples:

"The subject matter of your letter has my hearty approval."

Representative R. Lee Bussabarger, Lubec:

"I heard the discussion at Y. M. C. A. on this topic and favor S. D. 246."

Senator Willis E. Swift, Augusta:

"I am pleased to give this measure my support."

Senator Howard Davies, Portland:

"I am quite in accord with your views in the matter discussed in your letter and sincerely hope that I shall be able to be of assistance."

Representative Ralph O. Brewster, Portland:

"I am certainly in cordial sympathy with the objects of your committee. I have not examined the bill, but shall certainly be glad to lend my support to any measure designed to remedy this evil."

Representative W. G. Sawyer, Madison:

"Reg. Senate Doc. 246 will say you can and it can have my support in the passage of any law regarding any condition so far reaching (even to the 3rd and 4th generation) in its results on the health of our people."

Representative Charles P. Barnes, Houlton:

"You may be sure, and you ought to have been sure, that I will vote in favor of Senate Document No. 246."

DISTRIBUTION OF PAMPHLETS.

Mr. M. H. Gussman, Augusta:

"I enclose a few stamps. Will you kindly use the same to send pamphlets on venereal diseases, especially 'B. V. P.', to men whom I think will make use of them." (Names and addresses enclosed.)

Mr. Willis I. Ayer, Rockland :

"Have read the little book through and consider it something which I wish was in the hands of every young man and boy in this town. Many thanks for mine.

"If I can be of any help in the distribution of these pamphlets you can send me some and I'll see that the boys have them and that they read them, too."

George G. Webber, Esq., Auburn :

"It seems to me the pamphlet which you have sent me is a splendid thing, and I shall use it at the proper time. My boy is only nine years old, and I think he is disposed to ask me frankly information that he wishes to know. When he arrives at the proper age or the opportunity seems to be ready I shall certainly use your printed matter, and I thank you very much for sending it to me. From my personal knowledge I should say it would be very valuable."

Mrs. Mary L. Smith, Hallowell :

"Enclosed find two dollars for the fund used for distributing the 'B. V. P.' pamphlet. I have used those sent me some time ago. Think they are the best books of the kind I have seen yet."

Mr. J. A. Slocum, Brunswick :

"I feel it a privilege to contribute to this work, which I know is much needed and a most valuable service."

Mr. Charles S. Cummings, District Agent, Massachusetts Mutual Life Insurance Company, Auburn :

"I greatly appreciate the pamphlet sent. It is timely and in good taste and I believe will do much towards communicating the information that is vital to health and human welfare. The need is great, the task is tremendous. It will take constant work for more than one generation to lead the human race out of the misery in which it has fallen, often because it has walked in darkness. Count on me to assist in any way possible in this good work."

Following is a summary of the sources of income for carrying on the work since the first appointment of the committee :

	1911 1912	1912 1913	1913 1914	1914 1915	1915 1916	1916 1917	Totals.
Maine Medical Association,							
President R. J. Aley,		\$50.00	\$ 50.00	\$ 50.00		\$ 25.00	\$175.00
University of Maine,				5.00			5.00
Prof. A. W. Anthony, Lewiston,				10.00	\$ 10.00	10.00	30.00
Hon. F. H. Appleton, Bangor;				20.00	20.00	20.00	60.00
President David N. Beach,							
Bangor Theological School,						1.00	1.00
Dr. S. J. Beach, Augusta, contributed							
by Mr. S. C. Manley, Mr. T. B.							
Stevenson, Mr. N. L. Bassett,		\$30.00					30.00
Prof. Alice M. Boring,							
University of Maine,				1.00		1.00	2.00
Bowdoin College,						50.00	50.00
Bishop Benjamin Brewster, Portland,						5.00	5.00
Prof. Henry W. Brown, Colby College,					1.00		1.00
L. A. Burleigh, Esq., Augusta,	5.00		5.00				10.00

Prof. C. T. Burnett, Bowdoin College,		10.00	10.00	10.00	30.00
E. T. Burrowes Co., Portland,	25.00				25.00
Pres. George C. Chase, Bates College,			2.00	2.00	4.00
Mrs. Mary S. Cobb, Cambridge, Mass.,	25.00				25.00
Bishop Robert Codman, Portland, contributed by Mr. C. F. Libby, Mr. C. H. Payson, Mr. Herbert Payson, Mr. F. E. Richards, Mr. Elias Thomas,	110.00				110.00
Hon. Selden Connor, Augusta,	5.00			5.00	10.00
Prof. Marshall F. Cram, Bowdoin College,			5.00		5.00
Misses Mary and Mabel Davies, Portland,	25.00				25.00
Miss M. S. Davies, Trefethen,		5.00		5.00	10.00
Mr. Charles A. Dean, Boston, Mass.,		25.00	25.00	25.00	75.00
Mrs. Margaret Deland, Boston, Mass.,	5.00	3.00			8.00
Mr. R. W. Eaton, Brunswick,		10.00		10.00	20.00
Hon. Bert M. Fernald, West Poland,	5.00				5.00
Prof. M. C. Fernald, University of Maine,			1.00		1.00
Prof. and Mrs. G. T. Files, Brunswick,	25.00	25.00		10.00	60.00
Robert H. Gardiner, Esq., Gardiner,	50.00	100.00	100.00	100.00	450.00
Dr. S. C. Gordon, Portland,	5.00				5.00
Prof. W. H. Hartshorn, Bates College,			2.00		2.00
Mrs. John F. Hill, Augusta,			25.00	10.00	35.00
Dr. E. E. Holt, Portland,	25.00	10.00			35.00
Dr. Hiram Hunt, Greenville,			5.00	5.00	10.00
President Wm. DeWitt Hyde, Bowdoin College,	10.00	10.00		10.00	40.00
Dr. F. H. Jackson, Houlton,	5.00				5.00
Prof. A. J. Jones, University of Maine,			1.00		1.00
Mrs. B. S. Jordan, Pasadena, California,	5.00				5.00
Dr. V. T. Lathbury, Augusta,				2.00	2.00
Mr. T. W. Longley, Oakland,				2.00	2.00
Prof. J. L. McConaughy, Dartmouth College,				1.00	1.00
Mrs. Gertrude H. Macy, Pasadena, California,	5.00				5.00
Dean L. S. Merrill, University of Maine,			3.00	3.00	6.00
Dr. Berton C. Morrill, Harvard University,	10.00				10.00
Dr. Estes Nichols, Portland,		5.00	5.00	5.00	15.00
Prof. Paul Nixon, Bowdoin College,			5.00	2.00	7.00
Mr. C. H. Payson, Portland, included above		25.00	50.00	50.00	125.00
Mr. S. W. Philbrick, Skowhegan,		10.00	10.00	10.00	30.00
Dr. G. A. Phillips, Bar Harbor,	25.00				25.00
Mrs. Maria W. Prentiss, Bangor,			10.00	10.00	20.00
Mrs. Althea G. Quimby, North Turner,			1.00		1.00
Mr. E. P. Ricker, South Poland,	10.00				10.00
Mr. Hiram W. Ricker, South Poland,	10.00	10.00		10.00	40.00
President A. J. Roberts, Colby College,	10.00			10.00	20.00
Mr. W. K. Sanderson, Portland,			2.00	2.00	4.00
Dr. D. A. Sargent, Harvard University,	10.00	10.00		10.00	40.00
Mr. Paul D. Sargent, Augusta,				5.00	5.00
Principal W. S. Sargent, Hebron Academy,			5.00	5.00	10.00
Dean K. C. M. Sills, Bowdoin College,	5.00	5.00		5.00	15.00
Mr. J. A. Slocum, Brunswick,				2.00	2.00
Mrs. Mary L. Smith, Hallowell,				2.00	2.00

Hon. Payson Smith, Boston, Mass.,				2.00	2.00
Mr. Constant Southworth, Portland,			5.00		5.00
Rev. C. L. Waite, Woodfords.				3.00	3.00
Prof. F. E. Woodruff, Bowdoin College,			2.00		2.00
Dr. F. N. Whittier, Bowdoin College,	25.00	25.00			50.00
A Friend,		10.00			10.00
Prince A. Morrow Memorial Fund— Dividends,				36.00	72.00
A Friend,		10.00			10.00
Interest—Savings Bank,	5.72	23.03	4.44	1.80	40.56
Totals,	\$485.72	\$50.00	\$273.03	\$330.44	\$1,997.56

Following is a summary of the receipts and expenditures of the committee to date:

RECEIPTS.

PREVIOUS TO 1916-1917.

Contributions, 1911-1916,	\$1,263.00
Maine Medical Association Appropriations, 1912-1916,	150.00
Interest, previous to June, 1916,	34.99
Dividends, The Prince A. Morrow Memorial Fund, 1915-1916,	36.00
Total,	\$1,483.99

1916-1917.

Maine Medical Association Appropriation,	\$25.00
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CONTRIBUTIONS SINCE JUNE 7, 1916.

Hon. Payson Smith, Augusta,	\$ 2.00
Mr. T. W. Longley, Oakland,	2.00
President A. J. Roberts, Colby College,	10.00
Mr. Charles A. Dean, Boston, Mass.,	25.00
Professor A. W. Anthony, Lewiston,	10.00
Dean K. C. M. Sils, Bowdoin College,	5.00
Mr. R. W. Eaton, Brunswick,	10.00
Hon. Selden Connor, Augusta,	5.00
Miss M. S. Davies, Trefethen,	5.00
President George C. Chase, Bates College,	2.00
Mr. C. H. Payson, Portland,	50.00
President William DeWitt Hyde, Bowdoin College,	10.00
Mrs. John F. Hill, Augusta,	10.00
Dr. Hiram Hunt, Greenville,	5.00
Professor Alice M. Boring, University of Maine,	1.00
President D. N. Beach, Bangor Theological Seminary,	1.00
Mrs. Mary L. Smith, Hallowell,	2.00
Dr. V. T. Lathbury, Augusta,	2.00
Mr. J. A. Slocum, Brunswick,	2.00
Mr. H. W. Ricker, South Poland,	10.00
Mr. S. W. Philbrick, Skowhegan,	10.00
Professor and Mrs. George T. Files, Brunswick,	10.00
Bishop Benjamin Brewster, Portland,	5.00

Rev. C. L. Waite, Woodfords,	3.00	
Dr. D. A. Sargent, Harvard University,	10.00	
Professor C. T. Burnett, Brunswick,	10.00	
Mr. W. K. Sanderson, Portland,	2.00	
Bowdoin College,	26.00	
Professor Paul Nixon, Bowdoin College,	2.00	
Dr. Estes Nichols, Portland,	3.00	
Hon. F. H. Appleton, Bangor,	20.00	
Principal W. E. Sargent, Hebron Academy,	5.00	
Mrs. Maria W. Prentiss, Bangor,	10.00	
Robert H. Gardiner, Esq., Gardiner,	100.00	
		<hr/>
Dividends—The Prince A. Morrow Memorial Fund, 1916-1917,	\$72.00	\$411.00
Interest on Savings Bank Deposit since June, 1916,	5.57	
		<hr/>
		\$77.57
Total receipts for 1916-1917,		\$512.57
Total receipts since 1911,		\$1,997.56

EXPENDITURES.

PREVIOUS TO 1916-17.

Approved bills paid by the Treasurer,	\$ 50.00	
Literature,	2.50	
Telegram,	.25	
3,000 copies "The Boy's Venereal Peril,"	100.00	
Postage,	184.91	
Clerical work,	603.19	
Express,	12.99	
Printing and stationery,	131.05	
4 dozen "Sex Hygiene" pamphlets,	4.00	
		<hr/>
Total,		\$1,108.89

1916-17.

Postage and stamped envelopes,	\$ 95.00	
Clerical work,	313.35	
Express,	1.90	
Printing and stationery,	101.69	
1,000 copies "The Boy's Venereal Peril,"	20.00	
2,000 Bellfield pamphlets,	14.00	
		<hr/>
Total,		\$546.34
Total expenditures since 1911,		\$1,655.43
Balance on hand in the Brunswick Savings Institution,		\$342.13

RECOMMENDATIONS.

The committee believes that work should be continued according to the plans given for the last two years and set forth in the first part

of the present report. In addition, the committee feels that there will be great opportunities for service among the members of the National Guard of this state and later among the members of the National Army from Maine. The committee is deeply interested in seeing effective work done to deal with the social hygiene problems that are sure to arise in connection with the mobilization.

The committee hopes that its work of the past year will meet with the approval of the association and asks that it may be continued for the purpose of further work along the lines outlined.

An appropriation of \$25.00 or of \$50.00, as appropriated at the meetings of 1912, 1913, and 1914, would be of great assistance during the coming year, not only for the value of the appropriation, but for the moral influence it would have as an aid in raising funds by individual contributions, as must be done in order to do effective work.

Respectfully submitted,

(Signed)

F. N. WHITTIER,
A. L. STANWOOD,
R. H. HOLLAND.

***MEDICAL DEFENSE AGAINST MALPRACTICE SUITS.**

By JAMES A. SPALDING, Portland, Me.

Thirty years ago I was asked by some physicians in Machias and Eastport to go into that part of the state and see a number of patients in consultation. In planning this tour I thought of Dr. Milliken, then practicing in Cherryfield, so I wrote to him that I would call in on him on my way and see how he had flourished since we had studied together at Dartmouth. He wrote back to me, urging me to plan to stop over, as he had several cases for which he wanted an opinion and operations. Arriving there, I operated, amongst others, on a child with convergent squint, and before the operation I found that, as usual, the sight of the inturning eye was defective, but I forgot to call this to the attention of the parents. The child struggled a good

* Read before the House of Delegates June, 1917.

deal during the etherizing, but when quieted the operation went off well. I left the child in care of Dr. Milliken, sent proper lenses, and it is needless to say that two years later I was surprised to be sued for damaging one of the eyes during the struggles of the child. In vain did we protest at the trial that there was no sign of an injury, that the eyes were straight, and that squinting children had one eye defective. The jury went against me for \$1,500, but I carried the case to the courts, and that was the end of it. The shock of the unjust charge, however, always made me dread future operations, I got rid of them when possible, and when insurance came into vogue I got protection. My interest in defending suits of this sort began then and has continued to this time. In my reading I have found many facts favoring medical defense against such suits. Within the past two years, finding that with medical defense suits are fewer, damages smaller, and the cost being in *cents* where we pay *dollars* for insurance, I studied the merits of this sort of defense more closely than ever.

Two years ago, Dr. Gilbert tried to bring the topic before our association, but in vain, and the subject was tabled indefinitely. Sure that we needed only more instruction on the topic, I have carried on investigations throughout the nation, and I beg leave now to lay before you a brief abstract of what I have discovered.

Let me now mention data received from different states, proceeding alphabetically.

INDIANA. The introduction of medical defense into this state has largely increased the membership of the state association. For four years it has been successfully maintained at a cost of 75 cents per member, for a fund, which is utilized to hire a lawyer, obtaining witnesses and making ready for the trial. Many threatened suits have been withdrawn, for attorneys for complainants have found increasing difficulty in obtaining reputable physicians to testify against fellow members of the profession. Indiana is satisfied with medical defense, but seems to fear that, with the Workmen's Compensation and Health Insurance Laws, the aspect of affairs may change.

KENTUCKY. Eight years of experience has cost \$1,200 a year. In 1916, one case out of eighteen with a verdict of \$2,000, was lost, six were dropped, and the rest are quiet. 1915 showed twenty-three cases, this year eighteen. The chief cost is in preparing for trial. A continuance of medical defense is urged. The *Kentucky Medical Journal* (Oct. 1, 1916) argues that the great defect in all medical defense, whether by the association, or by insurance companies, is the ignorance of attorneys in preparing the case for trial. Medical defense should hire the same man again and again, until he becomes, as it were,

a specialist in defending such suits and can do it better than any other attorney. Doctors should think more; remember that in accepting a patient they are making a contract to do their best and not to neglect a bit. A curious case from this point of view is mentioned, in which a physician agreed to attend a lying-in-case, could not go, owing to another emergency, sent a substitute and was sued. Amongst the causes of suits are noted: The other doctor (all that can be done with such men is to take away their medical defense); dread of a suit; offering by the threatened physician to pay expenses to go and see some out of town doctor. Some suits are brought to kill off the doctor's bill. Every physician should read this excellent report by Dr. Moren, of Louisville, and following its teachings, he would keep his mouth shut, never say one word for foundation of a suit, and would go in, body and soul, for medical defense.

MASSACHUSETTS has had medical defense for several years and is satisfied. In a threatened suit the physician hands in a signed account of the affair, his treatment, his witnesses, and agrees to submit to the regulations of the society. Of thirteen cases tried in 1916, five gave verdict for defense, five were dropped, and the rest will probably not be heard from again. The cost to members was nineteen cents that year. After nine years, Massachusetts will continue this sort of defense. Probably more suits will arise as time goes on, owing to many indemnity laws as passed by the Legislature. Some rich members favor insurance rather than medical defense, but to this there is no objection. Some, it is said, have paid black mail, rather than to suffer the publicity of a trial.

MINNESOTA asks of its members \$3.00 for dues, and out of that all costs for defense have been paid. It has been working seven years with satisfaction. Earnest efforts are making to enroll every physician in the state to make the defense more powerful. The association does everything possible to keep suits out of court, then defends with the ablest lawyers, but, like all other states, it does not pay any indemnities, and it will be kept up.

MISSOURI has issued an elaborate report worthy of study. The essence of defense is, that suits are more easily prevented than defended. Every effort is made to keep them out of court. During the period preceding the filing of a suit, after it is threatened, the aid of the defense committee is of the greatest value, for the committee's counselor can give aid far beyond that of any ordinary attorney.

MISSOURI. The report for this state is a remarkable one, emphasizing everything needed in such misfortunes, and recommending

the permanent establishment of a permanent fund of \$1,500 for continuation of a defense which has been of so much value to the profession.

NEW JERSEY has a delightful letter-writing secretary, who writes enthusiastically on our topic. Amongst other items, he says: "Four years ago, using loyalty to the society, membership in the A. M. A., and medical defense as persuaders, showing, too, in connection with defense the better results than those from insurance, I went to the next meeting with but five delinquents where before there had been four hundred. In four years our numbers increased from 1,000 to 1,800. That this result is due to the holding power of defense you will believe when I mention the effect it has had on the public in discouraging suits. The history of insurance defense is a history of verdicts against physicians. They are always won in one way, the attorney for the plaintiff bringing out the fact that all damages are paid by the companies, and appeal is made to the jury for something for the patient's suffering, impressing on them that it will cost the doctor nothing. If damages are paid under medical defense, they are, it is true, paid by the physician, but the jury know that they are partners in a black mail. In nine years we have lost but two cases. Judges, too, see the honesty of the society's position; they know that they are not postponers of suits, and several cases have been turned out of court. In our first year we had fifteen cases, last year, two." In concluding with New Jersey, I can truly say that they are there enthusiastic over medical defense.

NEW YORK is a noble state for copying, for 1916 saw forty-one cases tried in court, and in every single instance under medical defense the verdict was for the physician. Great stress is laid in the New York reports, not on the safety of insurance, upon which in Maine we lay so much stress, but upon its dangers, for medical defense was well under way when insurance set in, physicians were importuned to insure against their own neglect, so that suits became much more frequent. The danger of insurance is, that you pay large sums for years, you are sued, the judgment goes against the corporation. Do you get a renewal? Are you not, then, just where you were before you insured? More publicity should be given to medical defense in order that people may understand that the physicians are banded together, standing back to back in mutual defense.

NORTH DAKOTA chooses a Committee for Defense, members serving one, two, three, four and five years respectively. They serve free, hire an attorney, investigate each case, try to adjust damages,

and to settle, if possible, out of court. Many details are mentioned in their report, and they should be studied. Physicians are urged never to testify against one another, and so far all are satisfied.

OHIO had its first year's experience in 1916 with medical defense, many members continuing to pay their insurance policies until the new plan has proved its value. The rules and regulations for this state are to be studied with much care, because they embody the latest suggestions for medical defense. Much stress is laid on X-ray pictures, but nothing, I regret to say, is said of the inability of ordinary jurymen or attorneys to interpret the actual meaning of skiagrams.

PENNSYLVANIA has collected a fund of \$5,000 for defense, but Philadelphia has its own society. The state society gives to the Philadelphia society 25 cents for each member practicing in that city, but it takes no notice of law-suits therein. An excellent application blank is herewith offered for study in case defense is favored at the present meeting of the House of Delegates. Out of ninety-three suits under medical defense in Pennsylvania eighty have favored the physician, in twelve small damages, from \$25 to \$50, have been given, and in one case \$1,000. I cannot commend too highly to your acute study this report of ninety-three suits.

PHILADELPHIA has accumulated by assessments, none larger than 75 cents a year, the sum of \$9,000. The longer this system is tried in Philadelphia the better it is liked. Applications for this defense go before the Censors, who decide what to do, and if they decide in favor of the applicant they advise and aid him in every possible and useful manner.

WISCONSIN, the last on my list, upholds defense by printing in bold type on its January *State Medical Journal* this notice: "Unless you have paid your dues, your medical defense protection expires January 31. Are you in the habit of allowing your fire, life, burglar, or accident insurance policies to expire?" Following that lead, the same number prints a powerful article on "More Publicity for Our Medical Defense." Starting out with satisfaction with medical defense, the writer tells what has been done, admits that there have been a few more suits this year than last, owing to machinations of personal injury attorneys and to improper interpretations of X-ray pictures, a shifting of which, in a fracture, for instance, although showing an apparent malposition, could do no harm to the plaintiff. All physicians threatened should hand in their papers at once to the association's attorney or to that of insurance companies, or to both united, for the state will gladly work with the corporations if desired.

Here is one sentence worth copying: "Do not talk promiscuously about your suit, not at all to lay friends, nor to lawyers, nor to mere acquaintances, and very slightly, if ever, to physicians. Otherwise, you may say something easily turned against you." The Wisconsin report for 1916 shows damages allotted as low as \$20, and as high as \$1,200. Out of seventy-seven cases so far tried under medical defense, carried through the law courts and absolutely settled, there was just *one* single case against a physician and the damages were \$300.

In concluding, I suggest that a committee be appointed now, to go over all these documents, to simplify them, to reduce them to shape, and to push them forward into the association for discussion. As I understand medical defense, the association pays for a skilled attorney and aids the threatened physician in every possible way, it backs up that physician, as a man, determined to fight his cause and to save him from false accusations based largely on uncertain evidence. I find that this backing up of one another improves the morale of the associations who have adopted it. I find that it saves us money, which we now pay for insurance, but which results more in making us a mark for the sniper than if we hid behind the trench of medical defense. I hope that you will not set this important topic aside, but keep it alive until settled in Maine.

Personally, let me say that it has been a pleasure to inquire through the nation concerning the actual workings of this valuable topic. I do most heartily recommend its adoption in Maine, and it will give me the greatest satisfaction to hand to any committee appointed to study the topic all the letters and documents received by me during my study of medical defense.

June 12, 1917.

FIRST SESSION OF THE HOUSE OF DELEGATES

AT THE

Congress Square Hotel, Portland, Me.,**TUESDAY EVENING, JUNE 12, 1917.**

The meeting was called to order by President Hart.

PRESIDENT HART: Before entering upon the regular program of the evening, I wish to say that Dr. Spalding is present tonight by invitation, having a brief paper that he would like to present to the House of Delegates on the subject of "Medical Defense." Dr. Spalding wishes to present some new phases of this subject, and I took the liberty of inviting him in to give us a paper of about fifteen minutes' duration, knowing that we would all be very glad, considering the ability of the doctor and his interest in these matters, to give him this time, and, if there are no objections, we will open this meeting by listening to the paper of Dr. Spalding.

DR. SPALDING: Mr. President and Gentlemen: I have talked to a great many men in the past year in regard to Medical Defense and they want to know what it is. Now, I am going to make it plain to you in a brief paper on "Medical Defense in Malpractice Suits."

(See page 375)

PRESIDENT HART: You have heard the reading of the paper. Do you wish at the present time to take any action?

On motion by Dr. Crane of Bangor, duly seconded, it was voted that the matter go over to the next meeting of the House of Delegates.

DR. SPALDING: Mr. President, may I say just one word more? It is to be understood that medical defense protects the members from law suits, but it does not prevent them from accepting insurance if they wish to do so. You will find in the documents handed to you that many of the states are perfectly willing to co-operate with the lawyers of the insurance corporations if the insurance corporations will allow them to do so. The idea is to hire one man to make a study of all kinds of medical evidence, and especially in regard to the X-ray plates, and to post himself in such a way that he becomes a very strong man to argue in favor of the defendant. He makes a specialty of the business and understands it, and can do it better than one lawyer picked here or another lawyer picked there.

DR. OWEN SMITH: Mr. President, I think that this matter has been before this society long enough. This is the second year and we

are only in session practically two days. Any procrastination is apt to be fatal, and it would seem to me it would not burden the House of Delegates to-night if, instead of laying this matter upon the table, a committee should be appointed to consider this matter and report later to the House of Delegates. I should very much prefer to have that done rather than to have this taken from the table, we do not know how much later, and absolutely nothing come from it this year. Now we have got Dr. Spalding with us and he is anxious to do what he can in this work, and he would be a tremendous aid to a committee. If the gentleman who laid this matter on the table would consent—

DR. CRANE: I withdraw my motion, Dr. Smith, and I move you, Mr. President, that the President appoint a committee of at least five to coöperate with Dr. Spalding to present later to this House of Delegates some plan of medical defense to be presented to the general society before adjournment.

DR. SMITH: I suppose a vote to reconsider the vote already passed would be in order.

DR. CRANE: I move that the vote be reconsidered whereby we voted that the matter should go over to the next meeting of the House of Delegates.

The motion, being duly seconded, prevailed.

PRESIDENT HART: Now Dr. Crane's motion is in order that a committee of five, acting with Dr. Spalding, take this question under consideration and report at some later meeting of the House of Delegates. How shall that committee be appointed?

DR. SMITH: By the Chair, Mr. President.

The motion prevailed, and President Hart appointed Drs. Spear, Woodcock, Thomas, Bryant and Stewart as such committee.

PRESIDENT HART: We will now listen to the reports of committees. First, the report of the chairman of the Committee on Venereal Diseases, Dr. Whittier.

(See page 359)

DR. OWEN SMITH: Mr. President, in connection with this report, I was asked a few days ago by some very influential women here in town to see if I could not do something to checkmate the work being done by a large number of prostitutes who have come into Portland since the assembling of the troops here. I think the city authorities have already taken some action. I do not know how active they have been, but, as I understand it from these women, there are a great many troops being sent here, not only from our state but from other states.

These young men are finding themselves more or less among strangers and with a lot of spare time on their hands, and they are met very graciously by these women. I think our committee whose duty it is to look after those things would, perhaps, like the endorsement of this association to go before our local authorities here relative to this matter. Do you not think that would help, Prof. Whittier?

DR. WHITTIER: I am sure the committee would be very glad of such an endorsement, and it would be a help.

DR. SMITH: If agreeable to the House of Delegates, I would make the motion that this House of Delegates request that the mayor of our city be as active as possible in suppressing this evil. It will do incalculable harm if a large percentage of these boys should become infected with gonorrhea or syphilis while they are here and before they start out for active duty. I also presume that your committee will see to it that these men are all supplied with a certain amount of literature, won't you, Dr. Whittier?

DR. WHITTIER: We shall be very glad to do that.

DR. SMITH: I feel, Mr. President, that Dr. Whittier and his committee have been a great credit to the medical profession in this matter, and I for one want to express my thanks for their good work. Whatever Dr. Whittier does he does thoroughly, as is shown by this report.

DR. SPEAR: Would not that apply as well to all other cities where they have training stations? There is a naval training station at Machias, also one at Rockland, and at other places. It would be very valuable there.

DR. SMITH: I amend my motion.

PRESIDENT HART: Dr. Smith, will you please condense your motion and put it in form?

DR. SMITH: I do not know as it is necessary to make a motion. If it is, I will write one out in condensed form.

DR. CRANE: Why not continue the same committee, Dr. Smith?

DR. SMITH: That will be done, anyway. My idea was to have this House of Delegates endorse the work of the committee and ask them to continue it. I will put a brief motion into form.

DR. WHITTIER: Mr. President, I would like to say that I brought in my vouchers for the expenditures for the past year, and I would be very glad if the Board of Councilors would audit my accounts and sign the report in the places left for such signatures. I have not got them with me at this moment, but they are at the hotel, and I would like to present them to the Board of Councilors.

THE PRESIDENT: That may be done later. While Dr. Smith is preparing his motion, is anything to be said on this same subject?

DR. POWELL: Mr. President, I just want to say, in seconding the motion, that it seems to me that we should make this motion broad enough to include an appeal not only to the authorities in Portland, as has already been suggested, but to every city in the state where troops are located and every town in the state. It would be a good thing to do wherever troops are assembled together. We are up against that proposition in Saco, where we have two troops at the present time, and they are a fine lot of boys. The various associations in the town have done everything that they can to interest them and give them the right sort of entertainment and that sort of thing; but those boys had not landed in the city hardly when they were met by this class of women, and they have been doing their level best to undo all that the good people of the community have been trying to do for those troops. One of the medical members in connection with the troop told me the other night that conditions were getting worse because of poor policing conditions. We cannot seem to make the civil authorities realize that we need better police protection, or that some move ought to be made against the women soliciting on the streets. I do not know whether that thing could be handled or not, but it seems to me that we can give our very substantial support to this report that has been made, and that we should do all in our power to forward the work this committee is doing. I believe that this will be a signal service on the part of the association.

DR. SMITH: I would move that the House of Delegates approve the committee's report, and second any effort on its part to protect our troops throughout the state. Is that forcible and explicit enough?

DR. POWELL: In just what form could this report and its endorsement by the association be brought before the civil authorities in our towns and cities? I do not quite get that.

DR. WHITTIER: My idea of the motion is simply an endorsement. I am sure, speaking for the committee, that we would be very glad to have such an endorsement. It would give us courage to go to the authorities of the different cities where troops are stationed and speak of the endorsement of the Maine Medical Association, and carry out such plans as we can for the improvement of existing conditions. I do not think the circulation of this report would be of any particular value, but we have accumulated a great amount of literature that has been left over from previous years, and have a great number of Belfield pamphlets, which I think would be suitable for distribution. We also

have some funds left. The plan of speaking at Y. M. C. A. meetings where different troops are stationed, allying the committee so far as possible with different organizations such as the Y. M. C. A. and W. C. T. U., has already been thought of. We are not committed to any definite plan, but propose to work with the local authorities in doing anything we can to improve conditions. Of course I have no delusions about it and I know it is a difficult problem. We probably will not be much more than able to scratch the surface of this problem, but this is certainly a very valuable endorsement and the committee is anxious to do all that it can along this line.

DR. SMITH: Do you think the House of Delegates can do any more than has been suggested, Dr. Whittier? Do you think we should send a committee to our mayor or police chief, or anything of that sort? Do you suggest anything that we could do, because I think this is a very important matter? It strikes me so. We want to help you in any way we can.

DR. WHITTIER: Anything that seems feasible to the House of Delegates I think would be of advantage.

DR. SPEAR: I know that in Rockland there is a military branch of the Y. M. C. A. that has taken the thing up and has established headquarters there, and I presume that is so in other cities, is it not?

DR. SMITH: I fancy so.

DR. WHITTIER: I have agreed to speak at Augusta, under the auspices of the Y. M. C. A., before the troops.

DR. SPEAR: You would have to reach them through branches of that kind, wouldn't you? I know that in Rockland the conditions are much better than we had hoped for, and this is through their work.

DR. WHITTIER: It seems to me, Mr. President, that it would be well to make full use of all existing organizations we can to help them along.

PRESIDENT HART: If I understand it correctly, the main object of Dr. Smith's motion is to make it known that the medical profession is backing up this work and appreciates it. That is the main idea.

DR. SMITH: Yes, sir, exactly.

THE PRESIDENT: Is there anything further to be said on the report?

DR. STEWART: Mr. President, I thought from what Dr. Smith said relative to some of the ladies speaking to him, that it might be of advantage to the Red Cross—and I understand it is that branch which has the responsibility, in a way, of the morals of the soldiers, wherever

they are—to know that this great organization of the medical men in the State of Maine considers that at this particular time, at this crisis in the affairs of the country, they would be justified from our standpoint in using very extreme means to prevent the prostitutes from following the troops, and that these women can say when they go to the mayor or to the town officials that the Medical Society of the State of Maine believes and urges that they should not only do as they have been doing, but that they will be doing a favor to the soldiers and a favor to the country, at present and in the future, if they use extreme means to prevent the influx of prostitutes wherever soldiers congregate. I should think that such a resolution might be printed and used somewhat to advantage.

DR. SMITH: I do not think we can do any too much, Dr. Stewart. I think it is a very important thing.

DR. POWELL: Would it be in order to move that this committee be authorized to extend or to present certain facts to the mayor of each city where troops are located, and to the selectmen of each town along the railroad where troops are located, stating to them in so many words that the State of Maine Medical Association, in session, realizing the danger to the troops, and so on and so forth, strongly urges that special efforts, just as has been outlined by Dr. Stewart, should be made to make the policing of the streets more rigid, and that these women be kept not only from following the troops, but kept so far as possible off the streets? Of course that is pretty wide; but if we could just send some definite and positive statement like that to the mayor or first selectman of the city or town, might it not have some effect where we cannot reach through the Y. M. C. A. and other organizations?

PRESIDENT HART: That motion, doctor, I think would be in order. Now will you formulate it?

DR. POWELL: There is a motion before the House, is there not?

THE PRESIDENT: I think Dr. Smith's motion was carried.

DR. CRANE: Mr. President, it would seem to me that we might give the committee full power to go ahead and do whatever it sees fit. That would clarify it, would it not, and leave the matter entirely in their hands?

THE PRESIDENT: Dr. Smith, will you please read your motion once more to see if that is not clearly included?

DR. SMITH: Be it moved that the House of Delegates approves the committee's report, and seconds any effort on its part to protect our troops throughout the state. It seems to me that covers the whole thing.

The motion was thereupon agreed to.

DR. STURTEVANT: Mr. President, I saw a young man the other day who went to Augusta, and he told me that there was a large number of young fellows who got infected there before they went before the Board for examination, and that a great many of those was through a chorus girl who came there with a show.

REPORT OF DR. F. Y. GILBERT, DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION.

Mr. President, I attended one meeting of the House of Delegates, and it might be well to just outline briefly the way their work is carried on. At the beginning of the session the standing committees are appointed to consider all questions, each committee having its own duties outlined. For instance, a committee on Public Health of five members, three of those members public health men, absolutely. The other two may be selected from any state to which they want to give representation, but, as I say, the majority are men who are experts in the line of work which comes under their consideration. Every matter relating to that branch submitted to the House of Delegates of the American Medical Association is read and immediately referred to that committee. That committee in executive session acts upon the proposed matter, and later reports back to the House of Delegates, at which time action is taken.

One can hardly realize the vast amount of work or resolutions submitted to that House of Delegates in a four days' session. It is only in this way that they can carry on their work and go through with it successfully.

I was delegate to the Minneapolis session and again at this session, and the one thing that impressed me more than anything else is that if Maine wants to be represented in the national association, it has got to have one man go there as a delegate year after year in order to become familiar with the workings of the House and be a factor in it. I did not feel that I was taking any part; in fact, I was unfamiliar with it. It seems a mistake for any state to send a different delegate each year. If Maine wants to take any active part in the National House of the American Medical Association, it must appoint one man who is willing to serve and who will go regularly each session, be ready to serve on the committees, and take an active part in the work.

On motion, it was voted that Dr. Gilbert's report be accepted.

PRESIDENT HART: Are there any other committees ready to report to-night? If not, we will listen to a very interesting part of our business department—the report of the Secretary.

DR. THOMPSON: I have just a little report to make as Secretary this year. I have heard from all the counties. Oxford County came in after June first. The other counties came in before. We have welcomed back another county which last year was suspended. I refer to Waldo County. They have been reorganized and come in with a membership of twelve.

The membership of the different counties, as I have it from the Secretaries, is as follows:

Androscoggin,	66
Aroostook,	52
Cumberland,	156
Franklin,	17
Hancock,	22
Kennebec,	75
Knox,	22
Penobscot,	86
Piscataquis,	22
Sagadahoc,	19
Somerset,	20
Waldo,	12
Washington,	40
York,	70
Oxford,	36
Outside members, paying directly to me and not to the counties,	10
Total,	<u>725</u>

That is all I have for the Secretary's report.

THE PRESIDENT: We will continue with the Treasurer's report.

DR. THOMPSON: As I said, the counties have all paid in, leaving out Oxford County, which will come in next year, as the books closed June first.

Cash in the treasury from last year,	\$ 781.69
Cash from dues up to June 1, 1917,	<u>1,781.10</u>
Total,	\$2,562.79
Paid out this year for bills,	<u>1,202.87</u>
Balance in treasury,	\$1,358.92

The bills are not all paid; that is, there will be the printing bill, the budget bill and the stenographer's bill, probably some \$150, to come out of the \$1,358.92; so that we have for next year probably eleven hundred and some odd dollars. That is a little more than we had last year at the same time. It has been customary for the past two years to have a budget committee appointed of two or three members to apportion out the money from the treasury for any bills that are to be paid. That has always seemed to me to be a good idea, because they have the Treasurer's report of the money in the treasury and so will not get us in the hole, as happened one year. I would say that I have my books here. The Board of Council usually audits the books after the first meeting. I have my bills here with the vouchers.

On motion, duly seconded, it was voted to accept the report of the Treasurer.

On motion by Secretary Thompson, it was voted that a Budget Committee be appointed to make out a list of the moneys to be expended next year, and on further motion by the same gentleman it was voted that the Councilors be appointed such committee.

DR. OWEN SMITH: Mr. President, I have a matter of finance that is coming up that is rather important, and, if it is in order, I would like to present it now.

THE PRESIDENT: I think, Dr. Smith, we can listen to it now.

Dr. Smith raised the question of defraying all the expenses of the speaker, representing the Eye and Ear Section, Dr. Jones, of Philadelphia. These expenses would include a moving picture machine, costing about \$40.00.

DR. WOODCOCK: I would make the motion, Mr. President, that the matter be referred to the Budget Committee, which will be in session right after this meeting.

DR. BRYANT: Mr. President, I cannot see why these expenses should not go in as do those of any other speaker who is brought here. This is a part of the association expenses, and why should it not go in just the same as the expenses of these people we bring here from Boston and other places? I cannot see why any special action is necessary if the thing has been put on the program and been approved by the Program Committee.

DR. THOMPSON: That depends on whether we have enough money to pay them. Last year we had to cut down considerably. The expenses of the Treasurer were omitted and Dr. Whittier's appropriation was cut down twenty-five dollars. It seems to me it is up to the Budget Committee to give what they can.

DR. BRYANT: It seems to me we are in it now the thing has been contracted for.

DR. THOMPSON: We have not always paid the expenses of people coming here.

The motion being duly seconded, it was voted to refer this matter to the Budget Committee.

PRESIDENT HART: Our Councilor from the First District, Dr. Whittier, is present. Dr. Whittier, have you a report to make?

DR. WHITTIER: I have, Mr. Chairman, a very brief report.

This First District, as you know, is made up of Cumberland and York counties. The President of the Cumberland County Association at the beginning of the year was Dr. Spalding. The Secretary was Dr. A. P. Leighton, Jr. The first meeting of this year since the last report was made was held Oct. 15th, 1916. The subject was "Surgical Syphilis." The essayist was Dr. W. I.

Cowes. At the same meeting another essayist was Dr. W. Grant Hague, whose subject was "The Lime Starved State."

The annual meeting was held on Dec. 14th, 1916, at which Dr. McCausland was the essayist. The subject was "Fractures." The officers elected at this meeting were, for President, Dr. Williamson; for Secretary, Dr. A. W. Haskell.

The third meeting was held on March 9th, 1917. It was a symposium on "Syphilis." The speakers were Drs. Burrage, Foster, Gehring, Pudor, Little, Fisher and Swift.

The fourth meeting was a military meeting, held on April 30th, 1917. The speakers were Dr. W. L. Cousins and Dr. Carl M. Robinson.

The number of members of the Cumberland County Association is 156.

The York County Association has also had four meetings during the year. The Secretary is Dr. Arthur L. Jones.

The first meeting was held June 29th, 1916, at Ogunquit. The subject was "Treatment of Tuberculosis Among Wage Earners." The essayist was Dr. W. Grant Hague, of New York City. The attendance was 47, including physicians and ladies.

The second meeting was held Oct. 5th, 1916, at Alfred. The subject was "The Vomiting of Pregnancy." The essayist was Dr. H. J. Everett, of Portland. The attendance was 15.

The third meeting was held January 4th, 1917, at Biddeford. The essayist was Dr. Alfred Mitchell, Jr., of Portland. Subject, "Hematuria." Attendance 25.

The fourth meeting was held April 25th, 1917, at Springvale. Essayist, Dr. T. J. Burrage, of Portland. Subject, "Chronic Arthritis, due to Chronic Hookworm Infection." The attendance was 15.

The number of members admitted to the York County Association since June 29, 1916, is 7; deceased, 3—Drs. Shannon, Gove and O'Connor. The number in good standing, members of Maine Medical Association in 1916, was 69; the number in good standing in June, 1917, 70, a gain of one member during the year.

Drs. Dolloff, Hill and Cook have entered the Medical Reserve Corps, and have been sent to Fort Benjamin Harrison, Indiana.

It was voted to accept the report of the Councilor from the First District.

THE PRESIDENT: Is the Councilor from the Third District, Dr. Williams, ready to report?

DR. WILLIAMS: Mr. President, the Third District comprises the counties of Sagadahoc, Lincoln and Knox.

The Lincoln County members are so badly scattered that the different physicians go into Sagadahoc or Knox counties, whichever is easier for them to attend. In Sagadahoc County I think all the physicians in the county are members of their county society. Their meetings are held four times a year and they almost always have someone from outside to read a paper. They have quite interesting meetings. I had the pleasure of attending one meeting of the Knox County Society, at which there was a very interesting paper presented, a very good attendance and a pleasant time. I think that, on the whole, the interest throughout the Third District in medical matters is as good, if not better, than it has been for a few years past.

On motion it was voted that the report be accepted.

THE PRESIDENT: I see Dr. Bryant, the Councilor from the Sixth District, is present. Is he ready to report?

DR. BRYANT: Mr. Chairman, I have no extended report to make from this district.

The district comprises Penobscot, Piscataquis and Aroostook counties. In Penobscot County we have had the usual number of meetings, with one extra meeting; that is, we hold eight meetings a year and this year we had one extra meeting, which was ladies' night. The meetings this year have been unusually well attended, the most of the speakers coming from outside the state. One meeting was held which was made up of a clinic or report of clinical cases from the Eastern Maine General Hospital. One other meeting was one which was held in honor of Dr. Mayo, our oldest member, eighty years old. The meeting was held, and one month afterwards Dr. Mayo passed away. This meeting was a very enthusiastic one and a very touching one all around, and, as I say, we had the good fortune of holding it a month before Dr. Mayo passed away.

In Piscataquis County I had the pleasure of attending one meeting at which over half of the membership of the county was present. The meeting was held at Guilford. As I understand, the meetings have been well attended there, though the members are widely scattered.

I intended to be present at the last meeting of the Aroostook County Society, but the meeting was gotten up rather in a hurry and I was not notified. It was a military meeting, with Dr. Cousins present, and, as I understand, a public meeting. In Aroostook I believe they hold but two meetings a year, and this last meeting was fairly well attended. Next year I hope to visit all the societies during the year, and perhaps bring in a more elaborate report than I have been able to to-night.

On motion it was voted that the report be accepted.

DR. STEWART: Mr. President, I have a business matter, as delegate from Oxford County, that I wish to bring before this body at some convenient time.

THE PRESIDENT: If there are no objections, Dr. Stewart, we will listen to it now.

DR. STEWART: I was delegated by the Oxford County Medical Society to bring up a new and unusual condition which arises from very unusual circumstances. I refer to the need for medical men in the present crisis. I understand that the State of Maine is supposed to furnish about two hundred medical men for the army or navy, and I understand also that just as the government takes men when they need them, they take doctors, and that, as I say, it is our duty to furnish about two hundred. I did feel at first a little delicate about suggesting this matter because I am a member of the Medical Corps in the National Guard, but, after thinking it over, I do not know as there is any certainty of my going. I have never been in the Federal service, and

possibly I shall be thrown down on account of some obscure thing, as is often the case; and possibly some of you here will go who do not now expect to. Somebody has got to go. It throws a burden on to the State of Maine to furnish two hundred doctors. Now the question is just how that burden ought to be apportioned. It certainly is a burden for a man with a practice to accept the salary of \$2,000 per year and go out as a first lieutenant, when he is unable to cut down his expenses at home and has to pay his own expenses while in the field. We in Oxford County are in favor of some method where the doctor who remains at home can bear some of the burden. In this way those of us who stay at home can go out and talk enthusiasm and patriotism with better grace than we otherwise could. It would be pleasing to us if some arrangement could be made so that we can go to the young man who is our neighbor, competitor and colleague and urge him to go, without his thinking at the same time that when he goes he is leaving his business for us to get. Therefore, we in Oxford County approve of some system being devised whereby $33\frac{1}{3}$ per cent. of a man's patients who goes into the service of the United States shall be given— $33\frac{1}{3}$ per cent. of the collections shall be given to that man during his period of service, and that his patients shall be returned to him when he comes back. That has been done in a number of counties and states, the doctor going away making a list of his patients. He can get those patients to sign a statement that they are his patients and would depend on him were he present. We can also give a list, and publish it in the papers, of doctors remaining at home who are willing to accept such conditions. A doctor going away would naturally refer his patients to a doctor who was willing to enter into such conditions. Thirty-three and one-third per cent. may seem rather a large amount until you consider the fact that, if you were going away, not more than half of the people whose business you would get if you were at home would sign such a statement. Therefore you probably would get about half or two-thirds of the $33\frac{1}{3}$ per cent. We do not urge this upon anyone, but it is the feeling in our county, and it is more heartily endorsed by the members who know that they cannot go away—who are too old to go or who have some disability of which they are aware—than it is by the ten or a dozen in our county who are planning to enter the service. If there is any objection to such a scheme we would like to know it. If there is no objection to it, we would like to have this society endorse it. I feel that it is a matter of sufficient importance to be considered.

THE PRESIDENT: Gentlemen, you hear the remarks of Dr. Stewart. The talk is a very timely one. I think we believe in the theory.

DR. CRANE: Mr. President, the idea is a very good one, but I do not believe it would ever work out in the City of Bangor. For instance, Dr. Thompson and myself do more or less surgery. A good deal of our work is referred to us by other doctors, and there is no way of getting our patients, or the doctors who refer surgery to us, to do this. They are not cases that can be referred one day to one man and the next day to another. The men in Bangor would never do it. It seems to me that this is a question of patriotism and nothing else. You are either going or you are going to stay at home.

DR. POWELL: A very strong appeal is constantly made to the medical men to get into the Reserve Corps. The thing that surprises me a little is that the pay should be so small, considering the men who are called. Of course they want to send over to France men under thirty-five—they claim they won't accept any over thirty-five until later—and yet they are asking men with families and of established practice to leave their business and enlist for the period of the war at a salary of \$2,000 a year, out of which they have got to supply their clothing and their mess. I know this problem has been up before my own mind pretty hard as to whether or not I could make ends meet on this end of the line—whether or not we could keep things going at home—and that seems to me a mighty big problem from the standpoint of a man who has not laid up enough money, at least, to keep things going while he is away. I am just wondering if that is final and definite in regard to those terms. I know that the British Commission was allowing a good deal more than that to members in the units. As I understand they were being given mess, being supplied with all their uniforms, and being allowed something better than \$2,000 besides. This, I think, is as reported by those who have been over there. It is a big problem, and I think it is one that has got to come up pretty strongly before the Maine Medical Association. I understand we are expected to send two hundred men from Maine, and we have only gotten fifty at the present time.

DR. STEWART: I understand the State of Maine ought to send more doctors, and the Medical Association of the State of Maine, if they are a patriotic organization—and I believe they are—should try and make the conditions so that a man can go. Now there are a great many young men—and it is the young men that they want and that they have got to have—who do not, as Dr. Powell says, know whether they can go or not on account of financial considerations. Now I do not understand who it is that objects, who it is impossible to arrange with to have this $33\frac{1}{3}$ per cent., whether it is the men who stay at home or the men who join the Reserve. I would like to have that

understood. Up in our county the men who remain at home would rather like to have such consideration. They would like to feel that they were doing something, that they were being patriotic, that they were helping men to go instead of staying at home and benefiting by their colleagues' going. I hate to see this subject dropped; I do not believe it is an impossibility. I believe, even if it should work out poorly, that the spirit of the thing would be shown, and it would show that this society was trying to do something in the right direction.

THE PRESIDENT: Gentlemen, do you wish to take any action?

DR. WILLIAMS: Mr. President, I feel interested in this matter that Dr. Stewart has brought up. From what I have been able to read of what has been done in the other states, it has been done through the county societies and not in the state society. I think that all the different counties have taken it among themselves where it was a little nearer home, and that they have agreed to look after each other's practice and divide up in some way.

DR. SMITH: Mr. President, why would it not meet with Dr. Stewart's wishes, and the wishes of the Oxford County men, if this society should move to approve of their action there, and the action of any other society that wishes to help men who are going to the front? It is simply, as I understand, an endorsement by the parent society of one of its county societies. I do not see any objection to it, and I do think that it would show that the state society was interested.

DR. SPEAR: Mr. President, it seems to me that if this House of Delegates takes any action on this matter, it is going to cumber things up a great deal. At present there is in this state a committee appointed by the Council of National Defence, who have had meetings regularly, and this whole thing is being threshed out from week to week and month to month. The gist of the matter is that in Washington they are simply swamped with work that they are not able to take care of. Only a short time ago, at a meeting held here, we telegraphed on to the Surgeon-General to find out how many men were then enrolled from the State of Maine. We could not get a reply from him, and he simply sent back word that he could not find out at that time. Now anything done would have to be done, as I understand it, through this state committee, of which Dr. Cousins is chairman, and I would suggest that if anything is to be done, communication be had with him, because I think that is the course that will have to be pursued. I can assure you that we are all working on it hard at the present time, and going ahead as fast as we can to get those one hundred seventy-five or two hundred men.

THE PRESIDENT: Gentlemen, it is getting pretty late in the even-

ing, and to bring this matter to a head, is there any motion to be put before the House of Delegates?

DR. STEWART: Mr. President, I make the motion that a committee be appointed by this House of Delegates to determine whether or not it is the opinion of the Maine Medical Association that a portion of the burden shall be borne by the men who stay at home, and that some arrangements can be made whereby $33\frac{1}{3}$ per cent. of the money collected from the patients of doctors in the service shall be returned to them.

The motion, being seconded by Dr. Powell, was agreed to.

The Chair appointed as such committee Drs. Powell, Stewart and Williams.

THE PRESIDENT: Briefly, I want to bring to your attention one thing, and I think before stating it I will appoint Dr. Gilbert to report to the House of Delegates at our next meeting. It is concerning a thing that is a wish of Dr. Spalding's. Dr. Spalding informs me that he has composed a paper entitled "The Case of Dr. Coolidge," telling of the murder committed by that physician, his trial, imprisonment, attempt at escape, suicide and post-mortem as conducted by a former President of this society. Inasmuch as the paper also presents the evidence on both sides in regard to the alleged re-appearance of the criminal in California, the case created national excitement never before equalled. The writer would like to have this paper published at some convenient time as a supplement to the Journal of the association, agrees to bear part of the extra costs, in the way of paying for reprint, and asks the assent of the association to his proposal. I think Dr. Gilbert is acquainted with the circumstances and with the paper, which Dr. Spalding has read, I believe, before the Cumberland County Society, and I appoint Dr. Gilbert as a committee to explain to you at our next meeting this matter and give us his opinion as regards the printing of it. It is evidently something that is very dear to Dr. Spalding's heart. It is something that he has worked out in a very interesting way, and as a matter of history is undoubtedly a very interesting thing to the medical profession.

One other thing brought to my attention. Mrs. Wadsworth, the widow of our recent associate, informs Dr. Spalding that she would like to sell or lease the hospital at Skowhegan, founded and kept up to date by her husband. Dr. Spalding would like an expression from the House of Delegates in regard to mentioning this business at one of the general sessions of the association, with a view of sustaining the widow in her needs; that is, if the House of Delegates deems it ad-

visable, to put this before the general meeting as a sort of advertisement to assist the widow of the late Dr. Wadsworth.

DR. SMITH: I move that that be done, Mr. President. I think that is the least we can do for a deceased member of the society.

The motion, being duly seconded, was carried.

THE PRESIDENT: To-morrow we have a very important committee that we must keep busy, of which Dr. Woodcock is the chairman, in regard to the medical defense bill. I think we cannot expect that committee to prepare its report to-night, and we can hardly expect them to be able to report before the general session to-morrow morning. Now will it be possible for us to have a meeting before the mid-day hour? There is quite a lot of business to come before the House of Delegates, and I suppose we have got to work. We are ready for a motion.

DR. SMITH: What has been the usual custom?

DR. SPEAR: At the call of the President.

DR. BRYANT: I think half-past one would be all right. The delegates do not necessarily hear all the exercises at the general meeting.

DR. THOMPSON: I suppose it is understood that this year there is to be one open meeting. Last year Dr. Cousins objected to this being a close corporation, and it was voted that one meeting during the session here should be an open meeting, so that any member of the Maine Medical Association could come in and express his views and hear what we are doing. So this year there will be one open meeting.

THE PRESIDENT: Unless there is some other notice announced at the general meeting to-morrow forenoon, the next meeting of the House of Delegates will be at 1.30 P. M. to-morrow afternoon at the City Hall.

Adjourned.

SECOND MEETING OF THE HOUSE OF DELEGATES,

JUNE 13, 1917, 3.30 P. M.,

AT THE CITY BUILDING.

Dr. Hart in the chair.

DR. WARREN: Mr. President, is this a public meeting?

PRESIDENT HART: Yes, sir, open meeting.

DR. WARREN: No doubt you gentlemen who just left the general session heard what Dr. Spalding said in regard to the light of that room. I wish to protest, as a member of the State Association for about forty years, against the place in which we hold these meetings.

It is impossible to hear on account of the poor acoustic qualities, and the light is very bad. I could not see your face at all, Mr. President, when you were reading your paper, although I sat near you; neither did I hear more than half of your valuable paper. It seems to me that something might be done. This is a complaint that is being made year after year. I am not speaking in behalf of any clique, but, when I come among the gods, I expect that they will listen to the words of the humble. I think another year something should be done to take this Association into a place where we can hear and see the speaker. It certainly would improve the quality of the meetings. I thank you for your attention.

DR. THOMPSON: I would like to say, Mr. President, that we are the guests of the Cumberland County Society, and it is usual for the county where the meeting is to be held to make the arrangements for the place of meeting. I think any suggestion of this sort should be made to the Cumberland County committee. I have never made the arrangements. As I say, I think that matter has been left in the hands of the men of the county, who, of course, know the best places to meet. I agree with Dr. Warren that that room is not a good place for the meetings, and I wish some way could be found so that we might have a better place. Much noise comes in over the transom from the corridor outside.

DR. WARREN: This is the governing body of the state association, is it not?

DR. THOMPSON: Yes, sir.

DR. WARREN: If they should say that they did not like the place, I think it would have some influence on the matter of selection.

DR. THOMPSON: I do not think anybody likes it.

PRESIDENT HART: I think Dr. Warren's remarks are very appropriate; but I should hate very much to make my remarks over again for the benefit of those who did not hear them. I seriously think that, for the profit of our meetings, we ought to be able to at least see, if we cannot hear, the speaker. Now if the Cumberland County Society feels a little bit diffident about it, I wish someone would at once make a motion that we as delegates earnestly request of the committee of arrangements that we be furnished a suitable hall in which to hold our meetings.

DR. SPEAR: Does the society meet here every year?

PRESIDENT HART: For the last few years it has met in this building when it has met in Portland.

DR. SPEAR: Are we sure that it will meet here next year?

PRESIDENT HART: Not sure of it. Now we will listen to the reports of some of our committees. First is Dr. Gilbert's report.

The 1910 session of the Maine Medical Association voted to discontinue its transactions and publish a state journal. At that time some 20 states owned and published their journals. It was estimated that the annual cost of printing, binding and mailing the transactions amounted to approximately \$700 and the amount was voted as an appropriation for the first year. A personal canvas was made of the wholesale drug and instrument concerns for advertising material and form letters sent to the large concerns doing interstate business.

A consulting board was formed and an editorial staff organized, who gave freely of their time. There were seven issues in the first volume and it has appeared monthly since. The 1911 and 1912 session appropriated \$900, and 1913 appropriated \$1,100, which were continued to 1916, which appropriated \$900. At that time the JOURNAL turned back into the state treasury \$500 unused funds, whereas the 1917 session will show a cash balance in the JOURNAL treasury.

In 1910 the membership was about 400. This was brought up to 600 and has been over 700 at times. Many of these members receive the state JOURNAL as the only benefit from their dues to the state society, as they rarely attend a state meeting, to say nothing of their county society.

During the seven years of existence the state JOURNAL has published the transactions of the state meeting, and, so far as possible, those of the county societies, together with the papers of the state meeting and some few of those read at county societies. Every effort has been made to secure reports of county meetings, also personal news and notes, and any other data of interest to the Maine physicians.

In 1914, the editors of the State Medical JOURNAL succeeded in having the A. M. A. appropriate \$5,000 for the establishment of a coöperative advertising bureau to handle the national advertising for the state journals. This has proved a success and has greatly assisted the editors in their work.

The past year has been one of added expenditures, and your governing board are pleased to report that there is a cash balance with only \$900 appropriation, thanks to the coöperative advertising bureau and those concerns who believe that the journals owned and published by the state societies are the ones that the medical man is most interested in. Just bear this in mind, that we are a coöperative body publishing a JOURNAL for our mutual good, and every advertiser who takes space in our JOURNAL has undergone the censorship of the Council of Pharmacy and Chemistry of the A. M. A. and conforms to the rules laid down by that body, and they stand ready to back up his statement as appearing in each issue of the JOURNAL. If the members of our association would only realize that the advertiser seeks the coöperation of the members of this association in seeking their patronage it would make the JOURNAL work less difficult for your editorial board at much less expense to the association and a greater value to all members.

The editorial staff have given liberally of their time, fully believing that the JOURNAL fulfills a prominent function in organization life. It brings the members in closer harmony and tries to send them a message each month from which they may find some little point of value.

It is a fitting time to point to the extensive work of our co-editor, Dr. James Spalding, who always favored a state journal, and who has given so liberally of his time and energies to the profession of Maine.

DR. GILBERT: I did not complete this report, Mr. President, for the reason that I have an application in for the Medical Reserve Corps and may be called to go to France almost any time. In that event I should be very much perplexed to know what to do with the JOURNAL work and what arrangements to make. I think, however, the work can be carried on by some of the co-editors, with the assistance of some well trained stenographer whom we can break in and who would perhaps be willing to devote his entire time to this work.

DR. BRYANT: How much appropriation would you need this year?

DR. GILBERT: Somewhere around \$800, I should imagine.

DR. BRYANT: We haven't but \$700 left now.

DR. GILBERT: If the JOURNAL is to be published, the expense of it must, of course, be met. It wouldn't matter much whether you published a JOURNAL or the transactions. That would be the primary expenditure out of the first appropriation made. The others would be secondary to that.

DR. BRYANT: How much did the publication of the transactions cost?

DR. GILBERT: We went over that in 1910, and it was figured out at about \$700, and we took that as our appropriation. That was on 400 membership, mind you; now we have a membership of 720.

DR. WOODCOCK: I would like to ask if there is not a feeling among the profession in the state in regard to the JOURNAL,—a feeling that perhaps the satisfaction was greater when we had the transactions in the form they were then in? In talking with Dr. Sawyer, of Aroostook, he said that he felt that going back to the old method of publishing the transactions would please more of the profession than does the JOURNAL as it is run to-day. I simply suggest this for discussion. I think that feeling is perhaps more widespread than you think for. I would like to have the opinion of other gentlemen in regard to it.

PRESIDENT HART: I think it is well to consider that point, because I think you have struck a vein that extends well over the State.

DR. OWEN SMITH: I have been opposed to this JOURNAL from its very inception on the ground that there was no man practicing medicine in the State of Maine with leisure enough to give to it to make it a credit to the medical profession in this state. We have had

it for some years and I am still of the same opinion. I think we should all appreciate Dr. Gilbert's efforts, for he has been very earnest, very sincere, and very conscientious in his work: there is no question about that at all. He has put in hours and hours and hours of labor, and he has received almost no compensation, if any: but the fact remains that it does not fill the bill, and it makes no difference why nor how. As I understand it, we are hard up and Dr. Gilbert is going away, and I am going to make the motion right here now that this JOURNAL be discontinued, and that the whole question of publishing our transactions be referred to our Board of Councilors. I believe that board is also the Budget Board, and they know what they can do and how they can do it and the best way to do it. If the time should ever arrive when some of our older and better men, or our younger and better men, feel that they have got a lot of spare time on their hands, so that they can devote it exclusively to this work and turn out a JOURNAL that is worthy of the profession of this state, then I should not oppose it. We are peculiarly situated down here in Maine. There are but very few men of leisure: they are all working men and all obliged to earn their livelihood from their profession. The editorship of any publication is a difficult position and demands unlimited time. I was asked, when I was appointed a delegate to this House, if I would not interest myself to have this JOURNAL stopped. It was thought that it had gone on long enough: and Dr. Gilbert remarking that he is going away makes it a very good time to act in this matter, it seems to me.

DR. WILLIAMS: I would like to ask what the effect would be on the contracts for advertising if we voted to discontinue the JOURNAL.

DR. GILBERT: The contracts run a year. Some of them have just been renewed. I do not know in just what position the association would be left if it tried to cancel them. Of course, the JOURNAL is not a thing that you can drop any time you want to. It involves your state association when you are tied up with a signed contract.

DR. SMITH: It is my opinion that the people advertising in this JOURNAL would not be so everlastingly upset if they should lose the opportunity of not advertising in it for one year. I would be one of a dozen to go on the bond of this association to try and overcome that objection. The Board of Councilors could also take that under consideration and they could publish these advertisements with the transactions if they wanted to.

DR. STEWART: Mr. President, several years ago there was an effort made to unite in publishing a medical journal of three different states: in fact, there has been more or less discussion as to whether

the MEDICAL JOURNAL should continue as it is, whether there should be some change, or whether it should be dropped. I think previously, such a question has always been referred to the county societies. In Oxford County we have heard of no one who has desired any change. I have no instructions from Oxford County in this respect, and I think that Dr. Sturtevant has none. As Secretary, I know this much, that if a man is not getting the JOURNAL, he makes a "holler." It has happened sometimes that the Secretary's list and the editor's list were not alike, and it seemed to cause a great deal of trouble to get them alike. Also, it is hard sometimes to get a man reported to the American Medical Association, and we have fault found with us in that direction. I feel that the doctors in Oxford County would rather have the JOURNAL as it has been published than to have the transactions printed as they used to be. One reason for this is that the transactions as printed in the JOURNAL come a little at a time, and we are not obliged to read all of it at once. Many of us who take the *Journal of the American Medical Association* do not read it at all; perhaps we do not read much of any of it. I do not like to see a question of this kind go through without any warning and without the doctors throughout the state knowing about it. I would like to ask Dr. Smith if his county society directed him to work against the continuance of the JOURNAL, or if it was some individual?

DR. SMITH: An individual. Our county society does not direct its delegates at all. It appoints whoever it wishes, and they have the privilege of acting according to their best judgment.

DR. STEWART: We attempt in Oxford County to find out the sentiment of the doctors who are sending us and follow that sentiment so far as we think it wise.

DR. SMITH: Such a course would be impossible in Cumberland County.

DR. WOODCOCK: I would like to say that I think the sentiment in Penobscot County has been against it. I am just speaking for myself and meeting daily members of the profession in my county. Most of the members take various journals—not only the *American Medical* but several others—and they do not think they are getting enough out of this JOURNAL to pay for it, and would prefer to have the transactions in bulk, so that they might be referred to at any time. I have all the transactions from almost the beginning of the association up to the time the JOURNAL was published. Of course, now we get them in piecemeal and many of them are thrown out unbound. I always bind mine and read them. I think the sentiment in Penobscot—and if I

am mistaken, I would like to be corrected by the other members from Penobscot present—is rather opposed to its continuance. Dr. Sawyer told me in the association to-day that he thought it ought to be discontinued and the old method resumed.

PRESIDENT HART: Are there any further remarks on the question?

DR. BRYANT: Mr. President, if we should go back to the old method, the question is whether we have got money enough in the association to publish the transactions in full, or whether or not, if it were left with the Councilors, and we kept within our appropriation, we should simply have to publish an abstract rather than a full report. At the time when they were sending out the transactions, there were but 400 in the society. To-day there is nearly double that number. In looking over the reports of the last transactions, the bill for publishing was somewhere between four and five hundred dollars for 400 members. If it is left with the Councilors, the question is what shall we do? The finances of the association are in bad shape.

PRESIDENT HART: All in favor of the motion as made, that we discontinue the publication of the JOURNAL, and that the question be referred to the Councilors for consideration, will please indicate it.

DR. STEWART: Does that mean that the Councilors have their option whether or not to continue the JOURNAL?

PRESIDENT HART: I was thinking that there was a chance for the Councilors to disagree with the affirmative of the question.

DR. SMITH: I think that the motion was that the JOURNAL should be discontinued and the method of publishing the transactions left in the hands of the Councilors.

A vote by showing of hands being doubted, a rising vote was taken, and the motion to discontinue the publication of the JOURNAL, and that the method of collating or publishing the transactions of the association be left to the Board of Councilors, was declared lost.

PRESIDENT HART: What will you do with the report of Dr. Gilbert?

DR. SYLVESTER: Mr. President, some reference has been made to the efforts to get the associations of other states to join with us. As a delegate from this association two years ago, I went to Burlington, Vt., with Dr. Gilbert, and conferred with delegates from that state and New Hampshire in an effort to combine and have a northern New England Medical Journal. It failed, partly through lack of support in New Hampshire. The Vermont delegates were in favor of it. So we had to give up that idea. The motion as just put I objected

to. I am perfectly willing, however, that this matter be left in the hands of the Councilors, for this reason: Certain contracts have been entered into and we do not know whether they can be terminated or not. I am perfectly willing that the Councilors should attend to the matter entirely; but the motion as put ordered one thing and seemed to leave no alternative. Some responsible body is necessary to act here. Therefore, if a motion were made to leave the matter in the hands of the Councilors as a board I would agree to it.

On motion, voted that the report of Dr. Gilbert be accepted.

DR. SINCOOK of Caribou: If it is in order, I would move that this matter in regard to continuing the JOURNAL, or the publication of our proceedings *en masse*, the same as formerly done, be left with the Council for its consideration, to do what it thinks best.

The motion, being duly seconded, prevailed.

PRESIDENT HART: We will now listen to the report of the Committee on Public Policy and Legislation.

DR. HARDY: I have no formal report to make, Mr. President.

I have been asked to outline what the committee did at the last session. The President, in his address this afternoon, took up pretty much all of the work that we covered. We had several conferences at Augusta, as well as in other sections of the state. One of the important bills we had to look after was the osteopath bill. As you know, two years ago we had a conference with the Legislative Committee of the Osteopath Association, and at the suggestion of the chairman of the Judiciary Committee, before whom the hearing was held, they agreed to a separate board of osteopaths governing the practice of osteopathy. This year, just before the hearing, we met that committee again and offered them that proposition. They were entirely unwilling to accept it, and so the proposition went before the Judiciary Committee, and no report was made at the time. Some of the members of the Maine Medical Association thought it advisable to have a further conference with the osteopath committee, but I do not think it was the feeling of the Legislative Committee that it was a wise procedure. However, it was undertaken and a compromise bill was prepared. That bill gave them a member of the board, and they were to be examined on the same subjects that we are examined in, except the practice of osteopathy was to be under the charge of the osteopathic member of the board. Then, after they passed that board, they were to be limited to the practice of osteopathy. They were willing to accept that provided they were allowed to practice obstetrics, I think. It seemed to me and to other members of the committee unwise to accept that, and the bill failed of passage. I think that bill, if it had gone through, would have been a very serious mistake. If they passed the same examinations that the regular practitioner passes, except in regard to the practice of osteopathy, I think they could justly demand the privilege of practicing surgery or any branch of medicine.

We also appeared in opposition to the bill introduced by the chiropodists empowering them to use local anesthetics, and that was defeated.

Your committee also appeared before the legislature in regard to the compensation law. It was the feeling of the committee that the injured party should be allowed to employ whomsoever he wished to, but that was lost.

The committee also formulated a health law which goes into effect the first of July. I think the feeling throughout the state—and certainly the feeling among the members of the legislature—was that our health department had been rather weak; and, at the suggestion of some of the members of the legislature, we went ahead with this project, a bill was patterned after a bill endorsed by the American Medical Association, and went through practically as drawn. There were some minor changes made and the bill can be further improved. I believe, as the result of this bill, that Maine will have one of the best health departments of any state in the Union. I heard to-day that the Commissioner had been selected, a well trained man. I hope now that this bill will be modified at his suggestion, if it works out as we hope it will. I think that the amateur philanthropists get all sorts of impractical ideas that they rush to the legislature with, and I think they are hurting legislation very much. I hope that in the future the Legislative Committee of this association will watch these things carefully.

The amount of work that has been done this past year has required a great deal of time, and the members of the committee have been to quite a bit of personal expense. The committee feels that this association should furnish some funds for the use of the committee: at least, they should be furnished a clerk, whose duty it should be to follow the legislative work. There are all sorts of bills put in there, and, unless the committee is constantly on guard, they get by before the committee knows that there is anything there. I believe that the least the association can do is to furnish the committee with a clerk, whose duty it shall be to watch the bills that come in and notify the committee of any legislation contemplated in regard to public health.

I cannot give you the bills that we have contracted this last year. I have telephoned to Dr. Beach twice to-day, but have been unable to get him. We employed an attorney to draw the bill and get it in presentable form, and we have been advised by an attorney on one or two other matters. Also there has been some expense of printing. I think perhaps sixty dollars will cover all the expenses.

PRESIDENT HART: Gentlemen, you have heard the report of your committee.

DR. SMITH: Mr. President, I think if there is any committee of this association that deserves its thanks, it is the Legislative Committee. This committee has done good work. I want to go on record as approving the work of this committee and endorsing them in every way we can, and I hope they will be appointed every year for the next ten years.

DR. HARDY: Mr. President, I want to say that there has been a bill presented to the association from Thaxter & Holt for fifty dollars. Now they were employed by the members who thought that a compromise bill should be drawn up. These men did work for the association, but they were not asked to do it by the Legislative Committee.

We did not feel it was wise to employ an attorney, but some of the members of the profession seemed to feel that it was important that we should have attorneys there, and apparently engaged them. I personally talked with Dr. Beach this morning, and he said that those men worked for the association, and he thought they ought to be paid. I do not think it is a matter for the Legislative Committee to approve, because we did not employ them at all.

Another thing I would like to say right here on the line of what Dr. Smith has said. If the association chooses a Legislative Committee, I think it wiser to follow their direction. We know that this work is coming to us and we try to prepare for it. My experience has been that we get down there and have our plans all laid, and then some fellow comes along from Portland and says, "Oh, that won't do," and butts in and upsets the whole scheme. That is what happened this year and we accomplished nothing. We had the bill killed when he came in, but we did not feel that it was wise. Of course, every member of the profession is entitled to his opinion, but I think that when you have selected a Legislative Committee, they should not be handicapped by men butting in and upsetting some plans that were fairly well laid.

In regard to the public health bill, when you give it consideration it is some trick to put through and make so radical a change in our state affairs as that health bill does. To put that through in one session is some trick. We had a conference with Gov. Milliken before the bill was introduced, outlined the bill to him, and asked him his attitude. We did not want to put in a lot of time and get this bill up to him and then have him kill it. He said: "If the bill comes to me, it will go by." I was talking with him the other day and he laughed and said: "When I told you that, I didn't have any idea that it would come to me," and I don't think anyone did. As I say, I think the work of the Legislative Committee will be much easier if outsiders do not butt in.

PRESIDENT HART: There seems to be about this condition: We are an association of approximately 700 members. We are squeezing along with barely money enough to pay our necessary bills. Now there is scarcely a member of this association who, if he wanted to spend five or ten dollars on a fishing trip, or something else for fun, would not do it. It is neither right nor just to ask this Legislative Committee to do all the work and pay their bills out of their own pockets. We can, by a four-fifths vote of the members present, make the annual dues what we choose, or we can by voluntary contribution raise the money. Let us in some way raise money enough so that

we can pay the normal expenses, at least, of our committees without feeling the necessity of discussing for half an hour or an hour whether we are able to do it or not. We can make ourselves able. A motion is in order.

DR. SMITH: Mr. President, how much would it take additional, do you think, to put us on what you might call decent footing, so that we would not be ashamed to meet once a year and talk things over? How much would we have to have?

PRESIDENT HART: According to what they say, if we were willing for one year to pay an extra dollar, that would put us on easy footing.

DR. THOMPSON: Four-fifths of the delegates present are sufficient.

A DELEGATE: Are we behind to-day?

DR. BRYANT: We have available at the present time to pay this year's expenses about \$1,200, and the Budget Committee may as well make its report, so far as it has gone, at the present time.

Dr. Whittier, for the Committee on Venereal Diseases,	\$ 25.00
Dr. Thompson, Secretary and Treasurer,	100.00
President's expenses,	25.00
Stenographer, approximately,	85.00
Treasurer's bond,	5.00
Badges, say	11.00
Insurance on the library,	6.50
Programs, about	15.00
Expenses of the three men who are coming from Boston, somewhere about	25.00
The man from the Mayo Clinic, say	75.00
The Legislative Committee should receive approximately,	60.00
Then there is the bill that has been mentioned of	50.00
	<hr/>
	\$482.50

This, you see, gives a total of approximately \$500 to come out of the \$1,200, leaving around \$700. Whether we publish the transactions or whether we publish the JOURNAL, we are in the hole.

DR. SMITH: I move you, Mr. President, that we add a dollar to the dues for another year. Motion seconded.

PRESIDENT HART: It is moved and seconded that we add a dollar to the dues, making them three dollars. That, of course, you understand, is in addition to your county societies.

DR. STEWART: Mr. President, just one question! In order to

explain the necessity—and the county Secretaries here will appreciate the fact that it is quite a good thing to be able to explain these things when you ask them an extra dollar—I would like to ask whether we have not \$1,400 each year? Is it on account of debts contracted in the past, or why do we not have an income of \$1,400 every year instead of \$1,200?

PRESIDENT HART: Will Dr. Bryant please explain to the gentleman?

DR. BRYANT: I think the Treasurer could explain it better than I can. We were not prepared to make a report now because we have not got all the bills in. I am just giving you a statement of the money we are told we have in the treasury.

PRESIDENT HART: If I understand the situation, we have the money to practically pay the expenses and the coming year's dues with which to pay next year's.

DR. BRYANT: This money is to pay for this last year's expenses, and the money which comes in for next year will be what we have to pay next year. If we publish the JOURNAL and \$800 is asked for, we shall be one or two hundred dollars in the hole. We are trying to pay as we go and started in last year.

TREASURER THOMPSON: The cash in the treasury from last year was,	\$ 781.69
Dues this year up to June first,	1,781.10
	<hr/>
Making a total of	\$2,562.79
Paid out of that,	1,203.87
	<hr/>
Balance now in treasury,	\$1,358.92

There are some bills to be paid out of that, not yet in. The printing bill for the programs has not been paid. Likewise the badges are to be paid for, also the stenographer's bill, out of this money we have here.

PRESIDENT HART: All those in favor of the motion that we for one year increase our annual dues one dollar will please indicate it in the usual manner.

DR. WILLIAMS: Mr. President, before that motion is put, I would like to call your attention to one thing. Those of us who were present the last day of the last session when this osteopath measure was put before the general session will remember that there was a vote that this association should not oppose the osteopaths if they asked for a separate board. Now the expense which our committee has been to there is no objection to paying.

PRESIDENT HART: I think that is a little off the question, is it not?

DR. WILLIAMS: It means that we have got to increase our dues, and when that comes to the attention of the association, I think the House of Delegates will get cursed just as much as Dr. Smith was cursed for his \$1,500 bill that he told about. There is no question but that the committee's bill should be paid.

DR. POWELL: I know last year there was a great deal of criticism as has been suggested by the Secretary, that the Board of Delegates took upon itself the burden of solving vital problems without putting them before the association. I do not know how many of us here present have been Secretaries and Treasurers of county associations, but I do know that if we raise the assessment by one dollar to every member of this association, we are going to have the worst "kick" from the members of this association that the association has ever seen, and the Secretaries will have such work cut out for them as they never had had before. One dollar does not seem to be very much when Dr. Smith says "let's add it," but when a Secretary attempts to collect that extra dollar he will be up against quite a proposition, and I think every man here who has served as Secretary will admit that fact. Personally, I think we are taking an unwise step to add one dollar to the assessment at this time without the complete sanction and approval of the association in general session.

DR. SMITH: I cannot see, Mr. President, any particular reason why we have got to consider one class in this organization and not another. The men appointed county Secretaries are appointed as a part of their duties as medical men. They do the best they can, and if there is any "kick," they can enjoy it the same as the rest of us. If this should go into the general meeting, I won't say half of them, but quite a lot of them, would have all kinds of objections. This body was organized in this way so that we could do something. You know perfectly well that the bigger and the more unwieldy a thing is, the less you get done. I think this is a democratic organization. Every county society elects its own delegates without any politics or anything else, and a good, representative bunch of men are sent here. I think they are amply qualified to do the business of the organization, and I hope that this thing will be immediately passed.

DR. BOYNTON: I would like to amend Dr. Smith's motion, and make it two dollars increase, and that this society pay the dues of the men who go to the front; that is, keep them in good standing in the society while they are away.

DR. SMITH: I accept that amendment. I feel just patriotic enough to urge that we ought to do a little something for those fellows who are giving up so much.

A rising vote being had, and eleven voting in the affirmative, the amended motion received a passage, that the annual dues be four dollars for one year, and that the association pay the dues of those who go to the front.

DR. THOMPSON: I would make a motion that the county Secretaries be notified of this change, and that the matter be explained to each county society by its Secretary.

DR. STEWART: Mr. President, would it not be a wise thing to have a financial statement of the resources and expenditures—an itemized statement—so that they can be presented and each member be shown exactly how we stand financially?

DR. THOMPSON: That is printed in the JOURNAL every year.

DR. SMITH: Mr. President, for the sake of clarifying things a little, that motion said "who go to the front." Would it not be a little clearer to have that "go into the medical service of the United States during this war?" If the vote should state "in the medical service of the United States," I think that would clarify it.

DR. BOYNTON: I accept that change.

PRESIDENT HART: It will be so noted.

DR. THOMPSON: If I am again elected, I will have the Treasurer's report sent to the county Secretaries—itemized account—if they would like it. It is supposed to be published in the JOURNAL. If the JOURNAL is continued, I will perhaps ask Dr. Gilbert to make a special page for it.

DR. SYLVESTER: Mr. President, I hate to call on Dr. Smith for another explanation, but his definition of the service would hardly do, inasmuch as there is a Public Health Service. You said "medical service." That might be the Public Health Service.

DR. SMITH: I will tell you, Doctor, what I mean. I mean that those fellows who volunteer their services and serve their country during this war, should be exempt from paying their dues.

DR. SYLVESTER: There is a Public Health Service, and there are other services besides war service. The Secretary might word this motion properly.

DR. STURTEVANT: Mr. President, I think it would look better to many of our members if we made a two dollar assessment instead of increasing the dues. Financially, there would be no difference. Some,

however, may take it that the dues are raised for more than a year, while, if it were an assessment, they would see on the face of it that it was only for the present time.

DR. THOMPSON: The Secretary can attend to that.

PRESIDENT HART: We will now listen to the report of the Visitors to the Medical School of Maine, Dr. Leslie of Andover, Chairman.

Your committee spent two days in May visiting all the departments of the Bowdoin Medical School, and we wish at once to express our appreciation of the many courtesies shown us by the Dean, Dr. Addison S. Thayer, at Portland, and the Assistant Dean, Dr. F. N. Whittier, at Brunswick, and other members of the faculty whom it was our pleasure to meet.

Twelve members of the teaching faculty were consulted, several lectures heard, classes working in laboratories inspected and several clinics witnessed.

We wish to report the following interesting facts:

Resources: Bowdoin College has interest bearing funds amounting to \$2,312,552.42, of which \$200,000 belongs to the Medical Department.

Equipment: The medical building at Brunswick is four stories high and contains two large lecture rooms, pathological laboratory, physiological laboratory, anatomical museum, and dissecting room, which occupies the entire top floor. Of the fifteen buildings of Bowdoin College, medical students more especially use the Mary Frances Searle's Science Building (for chemistry, biology, embryology, etc.), and Hubbard Hall, with its library of 111,000 volumes. In this building one room is devoted entirely to the use of medical students, and here are found over 5,000 volumes comprising the library of the Medical School of Maine, established in 1820. In Portland a very extensive library, the property of the Maine Medical Association, is also available to the medical students. This is found at the Maine Eye and Ear Infirmary. At Portland, the medical building on Chadwick Street contains lecture rooms, bacteriological laboratory, pathological museum and a room for instruction in minor surgery and work on the cadaver.

Faculty and Course of Instruction: There are sixty teachers, six of whom are full time instructors. A course of four years of thirty-six weeks each, with over 4,000 hours of instruction, is given, which conforms to the requirements of the American Medical Association. Two years' attendance at a literary college is required as a preliminary training before beginning the medical course.

The first two years of the course are given at Brunswick where excellent laboratories are available. The last two years are spent in Portland, where there is a vast amount of clinical material. The Maine General Hospital (150 beds) furnishes most of this material, but clinical instruction is also given at the Maine Eye and Ear Infirmary, Portland City Hospital, Children's Hospital, Marine Hospital, Portland Tuberculosis Class, Female Orphan Asylum, St. Elizabeth's Orphan Asylum, Holy Innocents' Home, Maine School for the Deaf, Maine School for the Blind and at the Edward Mason Dispensary, the last a gift to the Medical School by the late Hugh J. Chisholm and his wife. The Seniors take clinical work at the Boston Lying-in Hospital and at the Maine State Insane Hospital at Augusta.

Your committee was especially impressed with the character of the student body, most of whom are graduates of literary colleges and with the marked

interest in the students and the general welfare of the school shown by the different instructors. All of the graduates take internships, either in hospitals of Maine or other states, and many of the alumni of this school have attained national fame.

For comparison, during the last three years the medical departments of McGill, Leval, Harvard, Tufts, Yale and Cornell have been visited, and these schools offer nothing which the medical student of Bowdoin does not find either at Brunswick or at Portland.

Letters of inquiry to Abraham Flexner, of the General Education Board of Rockefeller Foundation, and to Dr. N. P. Colwell, of the Council on Medical Education of the American Medical Association, brought personal replies stating that Bowdoin Medical School is giving a satisfactory standard course of instruction.

The one thing needed is a larger interest bearing fund, and your committee would again recommend that the alumni of the school and the members of this association use all possible influence to secure a larger income for the use of the school.

In our opinion Bowdoin Medical School should have the unqualified endorsement of every member of the Maine Medical Association.

Signed:

FRANK E. LESLIE.

DR. LESLIE: Mr. President and Gentlemen:

I want to say in regard to the foregoing report that I inspected with Dr. Whittier the Dudley Coe Memorial Infirmary, just completed at Brunswick. This is a very complete little hospital, costing some \$40,000, and is the gift of Dr. Thomas Upham Coe, of the class of 1857, in memory of his son. It is fifty-eight feet in length and thirty-eight feet in width, has three stories and a basement, and is entirely fireproof. The basement contains a dining room, kitchen, laundry, furnace room, and janitor's room. The first floor contains the reception hall, physician's office, operating room, sterilizing room, nurse-matron's rooms, two wards of two beds each, and bath rooms. The second floor is designed especially for the care of contagious diseases and contains two hospital units, each unit comprising two wards of two beds each, duty room, diet kitchen, and bath room. These units are so arranged that they can be isolated. There are also a physician's room and a sterilizing room on this floor. The third floor contains rooms for the nurses connected with the infectious wards, rooms for maids, a solarium, and a storeroom. As I have said, it is a very complete little hospital and a great addition to the equipment at Brunswick, not only for medical students but for others.

I also found Dr. Whittier engaged in giving first aid instructions to the boys in the military class. There are two military instructors there, both of whom I met, and very fine fellows. Dr. Whittier gives these boys instruction in first aid and also in sanitation. That is not, of course, along the line of teaching in the medical department, but it is work he is doing for these boys.

Two years ago Dr. Flexner rather laid us all out flat. Since then he has withdrawn his objections to the small medical school; and, except for a few "knockers"—a few, unfortunately, among the faculty, and also a few here in Portland—there is nothing to be said against the Medical School of Maine. Any boy who is lucky enough to get through the Medical School of Maine has made a good start. I know some "knockers" here in Portland who failed to

get through that school, graduating from other colleges. The course, in my opinion, will compare favorably with any school in this country. It does not count any more to a man's credit to go into a big school like Cornell than a smaller school. In fact, the element of personal interest is more apparent in the smaller classes that they have here than it is in the large institutions like Cornell, McGill and so on. Unfortunately, I was at McGill last year, when they were laboring under great disadvantages on account of the war, but there is nothing there that the boys do not have here, and in my opinion they get it better here. Leval is out of the question entirely. In Harvard there is an excess of material, and it is impossible for the boys to absorb all the stuff in the time they have. I believe we should all boost the Medical School of Maine, and keep our boys here rather than send them away.

On motion, it was voted to accept the report.

PRESIDENT HART: There is one committee I will now appoint, and that is the committee to choose our officers for the coming year. I appoint on that committee Drs. Smith, Woodcock, Bennett, Spear and Williams.

PRESIDENT HART: We will now listen to the report of the Councilor from the Second District, Dr. Pratt.

DR. PRATT: Mr. President, I have been absent from the Second District for about two months now. The Secretary *pro tem* I have not been able to see, and so I have not got the latest report from my District. The organization is in good condition and the profession there is all right.

Voted to accept the report.

PRESIDENT HART: The Secretary calls my attention to a misprint in the Board of Councilors, where it says that Dr. Bryant's term expires in 1917. That, I understand, should be 1919.

I would now inquire if the Committee on Medical Defense bill is ready to report?

DR. WOODCOCK: Mr. President, the report of the Committee on Medical Defense is as follows:

PORTLAND, ME., June 14, 1917.

TO THE HOUSE OF DELEGATES OF THE MAINE MEDICAL ASSOCIATION:

Your committee is in favor of some form of medical defense conducted by the state association and desires to so report to this House of Delegates. We would offer these suggestions, namely: That a committee be named by the President of this association, whose duties for the coming year shall be to formulate some plan which may work out a draft to be presented to this association for action at the next annual meeting.

Signed:

G. M. WOODCOCK,
W. M. SPEAR,
D. M. STEWART,
B. L. BRYANT,
C. O. THOMAS.

PRESIDENT HART: You have heard the report of this committee, and bear in mind the suggestion there made. What will you do with the report?

DR. WOODCOCK: This is the matter brought up by Dr. Spalding at the meeting last night.

THE PRESIDENT: The committee recommends that in some form a medical defense bill be considered, and that a committee be appointed to consider it further, and draw up some form of a bill to be presented to the society next year.

DR. WILLIAMS: Mr. President, I would make the motion that this committee be continued and report their recommendations at the next annual session.

DR. WOODCOCK: Mr. President, the objection to that, I should think, would be that it would have to be someone in touch with Dr. Spalding and near Portland, as he has all the material. It would be difficult to consult the different members of this committee in reference to it. Dr. Spalding has gathered together a fund of material on these points, and I think it would be necessary for one or two members of the committee to be in this vicinity. Dr. Spalding has had a great deal of correspondence about this matter, and, as I say, has all the material to work on.

DR. SPEAR: It needs to be a good, live committee.

DR. WOODCOCK: I should suggest that the committee consist of three members instead of two.

DR. THOMAS: Mr. President, I think Dr. Spalding said in his remarks this morning that he would be glad to do anything he could to aid in this matter. It seems to be very close to him, he has gone into it thoroughly, and has it all at his finger-tips. It was his suggestion that whatever committee was appointed should take this matter up, and of course it was supposed that the JOURNAL would be continued and that this matter would be brought before the medical men's attention in articles written from time to time, so that when they came to the meeting next year everybody would have it fresh in their minds, thus enabling them to take some action at that time.

DR. BRYANT: Mr. President, I would suggest that Dr. Spalding act upon that committee. He knows more about it than anybody else. I think if I were going to leave the drafting of a bill to anybody, I should leave it to Dr. Spalding, and put on with him such members in this locality as could act with him.

PRESIDENT HART: The suggestion, I think, is a very good one that the committee consist of three, and allow them the privilege of

appointing whatever assistants they need. Now a motion is in order.

On motion by Dr. Thompson, it was voted that the committee consist of three, and that they appoint their own assistants.

The President thereupon appointed Drs. Spalding, Woodcock and Spear, they to be allowed the privilege of calling in such assistance as they need in the way of advertising, clerical work, and so forth.

DR. SMITH: I would like to move you, Mr. President, that all other matters be referred to this House of Delegates at to-morrow's meeting.

PRESIDENT HART: The members of the House of Delegates are expected to be present at eight-thirty to-morrow morning, when we will endeavor to close up the work.

Voted to adjourn until 8.30 to-morrow morning.

THIRD MEETING OF THE HOUSE OF DELEGATES,

JUNE 14, 1917.

Meeting called to order by President Hart at 8.30 A. M.

DR. SMITH: Mr. President, your committee on nominations is ready to report.

THE PRESIDENT: We will hear the committee on nominations.

DR. SMITH: Your committee begs leave to report the following gentlemen as candidates for the following offices:

<i>First Vice-President</i>	GEORGE H. COOMBS, Waldoboro.
<i>Second Vice-President,</i>	D. M. STEWART, South Paris.
<i>Secretary and Treasurer,</i>	J. B. THOMPSON, Bangor.

BOARD OF COUNCILORS.

First District,	F. N. WHITTIER, Brunswick.
Second District,	G. L. PRATT, Farmington.
Third District,	A. F. WILLIAMS, Phippsburg.
Fourth District,	O. W. TURNER, Augusta.
Fifth District,	W. N. MINER, Calais.
Sixth District,	B. L. BRYANT, Bangor.

COMMITTEES.

On Scientific Work: F. H. Jackson, Houlton; E. W. Gehring, Portland; T. O. Vanamee, Portland.

Public Policy and Legislation: D. A. Robinson, Bangor; T. E. Hardy, Waterville; S. J. Beach, Augusta.

Venereal Diseases: F. N. Whittier, Brunswick; A. L. Stanwood, Rumford; R. A. Holland, Calais.

Necrology: James A. Spalding, Portland.

Cancer: Thomas A. Foster, John Sturgis, G. A. Pudor.

Delegate to the American Medical Association: W. F. Hart, Camden. Alternate, F. W. Mann, Houlton.

Visitors to the Medical School of Maine: F. E. Leslie, Andover; F. E. Sleeper, Sabattus.

Delegate to National Legislative Council: Thomas E. Hardy, Waterville.

Delegate to the National Council on Medical Education: F. E. Leslie, Andover.

Chairman Committee on Public Health among Women: Lucinda B. Hatch, Portland.

On Health and Public Instruction: Doris M. Kraus, Augusta; Laura Noyes, Rumford.

Committee to Represent Maine at the State Anti-Tuberculosis Meeting: Estes Nichols, Portland.

On motion by Dr. Sincock, it was voted to accept the report of the committee.

DR. THOMPSON: I would like to say, Mr. President, that I will be very happy to act as Secretary if I am here; but I would like to get someone to help me out if I am not here.

DR. SMITH: Would it be possible to appoint an alternate in case you happen to be called away?

DR. THOMPSON: No such provision is made.

DR. SMITH: But these are war times.

DR. THOMPSON: I do not know why an alternate could not be appointed in that way.

DR. WILLIAMS: Why could not that be left with Dr. Thompson and the new President?

DR. SMITH: The House of Delegates might vote that authority.

On motion by Dr. Williams, voted, that in the event Dr. Thompson is called away, the President and Secretary be authorized to appoint a substitute for Dr. Thompson in his absence to act as Secretary and Treasurer.

PRESIDENT HART: I wish to say that last evening I received a letter from Dr. Burr, of Portland, chairman of the Cancer Committee, stating that he was obliged to be away, but that he had given some

papers that he had in reference to that committee to Dr. John Sturgis. Unfortunately, Dr. Sturgis is not here this morning. Evidently, Dr. Burr has made some preparations for a report of that committee, and I regret that I did not receive his letter in season to confer with Dr. Sturgis.

On motion by Dr. Sylvester, it was then voted that the Secretary and Treasurer cast the ballot of the association for the officers nominated.

The Secretary performed his duty and the foregoing named officers were declared elected for the ensuing year.

DR. THOMPSON: Of course this committee designates the place for the meeting next year.

PRESIDENT HART: Have you gentlemen taken it into consideration?

DR. SMITH: I will say for the Portland delegation that we are always glad to have you come here.

DR. THOMPSON: I always like Portland. I think it is the best place to hold the meetings.

DR. SMITH: So far as the place of meeting here is concerned, I do not think anyone has given it a thought. They took it for granted that this building was a central place and all that. We all knew the noise was here, but we are used to it and do not think anything about it. I think, however, that the county society will next year try to remedy this difficulty now that their attention has been called to it. I think it is more a lack of thoughtlessness on their part than anything else.

DR. THOMPSON: They said last year that they could not get any other place that would be suitable.

DR. SMITH: Since then they have had some new halls here, and I think, also, that some of these rooms could be rearranged a little.

DR. SYLVESTER: Mr. President, it would seem to me that, as war is on and next season is liable to be broken up some, no other section of the state would be likely to want it, and I therefore move you that Portland be the place of next year's meeting.

The motion was carried.

DR. WOODCOCK: Mr. President, I think the City Building is a good place for the meetings, and we would probably have to put up with some inconveniences no matter what hall we had. They have always treated us well here, it is central, and people know where it is. I should think the City Building would be the best place.

DR. THOMPSON: I should think the local committee here would know more about the new halls, if they have them. That hall out there (referring to the Council Chamber) is, of course, disagreeable on account of the noise.

PRESIDENT HART: I think that if Dr. Spalding lives and retains his faculties this year, he will bear this in mind. Personally, I have found the light in the Council Chamber very bad, but I did not know but I was one of a very few. I was very glad that Dr. Spalding spoke in the way he did, and I think we will have different arrangements there in the way of lighting another year. What we can do about hearing is another question.

On motion by Dr. Smith, the thanks of the association were extended to the City Government for the use of these rooms during the convention and for the courtesy of the officers, and the Secretary was directed to send to the Mayor a formal notice to that effect.

PRESIDENT HART: Now we shall have another meeting sometime this forenoon.

DR. WILLIAMS: I should think, Mr. President, that with what little work there is to be done—the report from Dr. Powell and the report regarding the JOURNAL and the finances of the association—if the meeting were called immediately after the morning session, we could wind everything up then. I make that as a motion.

PRESIDENT HART: At our next meeting I want you to be ready to express your opinion on the subject that was brought up yesterday—the question of financing your Legislative Committee. When you stop to think of it, you all know that that committee is doing too much individually and collectively for the society as a whole, and if the society is not able to pay the expenses of that committee—

DR. SMITH: Why can't we attend to it right now?

THE PRESIDENT: A motion is in order.

DR. SYLVESTER: Mr. President, one thing about that I will take the liberty of speaking of. While I have not been on the committee at Augusta, I have been there in a private capacity. I think the expenses of the Legislative Committee will go all right and should be paid, but in regard to employing legal assistance, I think some limit should be put upon that. I am not speaking for myself, but for what I feel would be the effect on the association. Legal counsel is so expensive that it runs into a thousand dollars very quickly. I am not so sure that if we should place a financial limit on the amount to be expended for legal counsel it would cover the ground. A Legislative Committee does not want to be barred from engaging counsel. Some-

thing might come up that they would want to ask a lawyer about, but a great many men in this state take exceptions to the bills that have been presented here, and they would do so again. I think it would be more satisfactory to the body at large if a limit were placed upon the amount to be expended in any one year for legal counsel, so, if it came to a motion, I should put it in that way, and I should set a limit on the amount of counsel fees for any one year, not with the idea of debarring the committee, but for the effect on the association.

DR. SMITH: What is your limit?

DR. SYLVESTER: Why, I should suggest that if any special occasion arose, the limit should be raised, but if we said that we wished to pay the committee's expenses and to authorize them to employ legal counsel at a cost not to exceed one hundred dollars, that would pay for ordinary consultation fees and would be considered an ordinary expense; but to authorize them to go any higher than that I should object to myself, with the feeling that there is in the association, unless there was some very special thing that needed attention.

PRESIDENT HART: The question in mind was simply the personal expenses of the committee, but your suggestion, I think, could be very appropriately included.

DR. SYLVESTER: If we vote to pay their expenses, they might say, "Here is a legal question that we do not know about and we ought to ask a lawyer about it." When they do that they spend money very quickly.

DR. WILLIAMS: It seems to me, Mr. President, we are crossing a bridge before we come to it. If we vote this year to pay the committee their personal expenses, there won't be anything else to pay as there is no legislature in session. We have increased our dues, and the next session should have a little working fund, which we have not got at this time. We had quite a discussion on this same matter a year ago. I would make the motion that the association pay any expenses incurred by the Legislative Committee—

THE PRESIDENT: Do you mean to simply limit them to their personal expenses?

DR. WILLIAMS: Any personal expenses they are under.

DR. SMITH: For the year past?

DR. WILLIAMS: For this year.

DR. THOMPSON: We haven't got the money to pay them this year.

DR. WILLIAMS: I am talking about the future. This last year is past and gone.

THE PRESIDENT: Bear in mind that we are considering now the future, not the past.

DR. WILLIAMS: And that is what I am speaking of. There will be another meeting before the next session of the legislature, and we ought then to be in better shape to meet the bills.

DR. SMITH: Of all the committees that are appointed, this, in my opinion, is the most important one. If the committee is expected to be a permanent one, their expenses should be paid and their attorneys' expenses not exceeding one hundred dollars. If the same committee stay in power year after year, that will probably be about all they will need, because they have not got to run to an attorney for every little thing, as an inexperienced committee would have to do. I think Dr. Sylvester's suggestion that the committee be paid their expenses and attorneys' fees not exceeding one hundred dollars, a good one.

THE PRESIDENT: Will you make that as a motion?

DR. WILLIAMS: There is a motion before the house now.

DR. SYLVESTER: I second Dr. Williams' motion.

THE PRESIDENT: Which was to pay the personal expenses?

DR. WILLIAMS: For the future, not for the past.

THE PRESIDENT: The motion is that we vote to pay the personal expenses of our Legislative Committee in the future. Is there anything to be said on the question?

DR. WOODCOCK: Mr. President, I was just going to say that I do not see how a committee of this type can do any legislative work without legal advice. It is a very important suggestion, that of the limit of one hundred dollars. It may be more; it commonly is more. I do not think a committee of that type can work at all without legal advice from time to time during the session.

DR. SPEAR: The Legislative Committee has practically no work to do during the coming year, and I do not understand that this House of Delegates can bind a future House of Delegates to make an appropriation. I do not see how there is anything to be gained by limiting them to one hundred dollars during the next year.

DR. SYLVESTER: Dr. Williams' statement, that we do not need to vote any legal counsel when there is not to be a session of the legislature, also applies to his motion that it is not necessary to vote anything for the Legislative Committee so long as there is no legislative session this year. Let the future take care of itself.

THE PRESIDENT: Are you ready for the question? It is moved

and seconded that we vote to pay the personal expenses of our Legislative Committee for the future.

DR. WILLIAMS: For next year.

THE PRESIDENT: There is no legislative session the next year. Do you want to simply limit them to next year or make that an established thing; or, will you wait a year and have it all threshed over again? Why not make it an established thing for the society?

DR. WILLIAMS: That is looking too far into the future.

DR. SPEAR: I do not think you can bind the House of Delegates in that way.

DR. SMITH: I do not think that is legal, Mr. President.

DR. WILLIAMS: I withdraw my motion.

The pending question being on the motion by Dr. Smith that the expenses of the committee be paid, and attorneys' fees not to exceed one hundred dollars.

The motion was agreed to.

THE PRESIDENT: We have established a good precedent.

Voted to adjourn.

FOURTH MEETING OF THE HOUSE OF DELEGATES,

THURSDAY FORENOON, JUNE 14, 1917.

Meeting called to order by the President.

PRESIDENT HART: I believe the delegate from Kennebec County is not present, and I am going to ask Dr. Beach if he will please act as delegate from that county for the time being.

DR. THOMPSON: Dr. Beach is a delegate.

DR. BEACH: We should like to have Dr. Hardy also represent us, if possible.

THE PRESIDENT: Is the committee of which Dr. Powell is chairman ready to report?

DR. POWELL: Mr. President, your committee appointed to consider ways in which the physician who stays at home can bear, in part, at least, the burdens and responsibilities of the man who enlists and goes to the front, reports as follows:

A few words in introducing our resolutions might not be out of order.

In the first place, as we all know, there is a great call for medical men. As has been said a number of times, the call may come for about 20,000 men. We know that a great many men a few months ago, filled with the spirit of

patriotism and enthusiasm, asked for commissions; and the chairman of the American Commission makes the statement that, while 8,000 men were asked to accept commissions who had already asked for them, only 3,000 out of the 8,000 responded after the commissions were offered them. I do not know as I make myself clear, but of the men who asked for commissions, 8,000 were asked to accept their commissions eventually, after they had been examined and after all the red tape had been gone through with, but of that 8,000 who had already asked to be appointed, only 3,000 accepted their appointments after they came to them. Now it is very evident that there is some reason for this. The matter seems to be one of great embarrassment to the heads at Washington, and perhaps we can put the reason under three heads. In the first place, one reason for the poor response was that men began to realize that, in signing up for the war, they must leave all that they have accomplished since the beginning of their practice, and must come back with the knowledge that their practice will be pretty largely dissipated and lost to them. That must be the one fact that is holding a great many from accepting their commissions or from offering themselves. We do not know why the younger men, just graduated, have not responded better. It is the older men, the medical men who have gone through many years of preparation, and who have taken from five to ten years in becoming established in their practice, who have come forward. Now it does seem that the duty and spirit of the men at home demand that they assume something of the burden, and make, if possible, that burden a little lighter for those men who are enlisting and who are ready to give themselves to the service of their country. An effort has been made to meet this problem to a certain extent by the Maryland State Board of Preparedness, but before I outline to you that plan, I would like to give you an idea, in a very few words, of what they are doing in England right along this line. I am going to read to you just a few of the rules that are put up to the Englishmen, as follows:

"1. When a new patient presents himself, the physician staying at home should ask the name of the doctor who last attended him. If this doctor is absent on service, and has left a *locum tenens*, an attempt should be made to induce the patient to go to the *locum tenens*.

"2. If the last doctor who attended him is on military service, it should be explained to the patient that attendance will willingly be given on behalf of that practitioner and on no other terms.

"3. Any attendance on behalf of such patients should be carefully and separately recorded, and a list of such attendances sent at regular intervals to the representative of the absentee.

"4. An attempt should be made to ascertain the fees charged by the absentee, and a charge not less than this should be made on his behalf.

"5. Accounts rendered on behalf of the absentee should mention the absentee's name, and moneys received should be divided according to the scheme adopted by the local Medical War Committee.

"6. The rule of dividing the fee should apply to all kinds of work.

"7. New patients introduced by a patient of an absentee should be regarded as belonging to the absentee's practice."

You will notice that that is pretty radical.

"8. In cases in which the patient's frequent change of physician leads to

doubt as to who should be regarded as the regular attendant, the absentee should be given the benefit of the doubt."

You can see that the rules have been made pretty radical there—too radical in the judgment of the Maryland State Committee. This committee has adopted resolutions something like this: That the physician at home should turn over one-third of the fees received from patients of the absentee, after proper provision has been made for recognizing that patient as a patient of the absentee. Special measures are taken to make this acknowledgment, and it is done in this way, which perhaps I had better read:

"Resolved, that the secretary of the society shall have prepared letter blanks according to the form attached, to a number sufficient to supply those physicians who are called into active service with a sufficient number so that they can send a filled-out form letter to each patient, a carbon copy going to the doctor who has agreed to look after the physician's practice, and a second carbon copy to be sent to the secretary of the state society.

"The secretary of the state society is instructed to file the carbon copies received by him, and on notification by a physician that he has terminated his service with the government and has resumed his practice, the secretary of the state society shall then send out to each of the patients of this physician whose names and addresses he has received in the filed letter a letter stating that the physician has resumed the practice of medicine, and requesting the patient in the name of the society to recognize the physician's patriotism by summoning him should he be in need of medical attention.

"This method is the only one devised which can in any way meet the situation that confronts the physician who is patriotic, and who is penalized for his patriotism by the loss of his practice. By this method the profession at large is 'put on its honor,' the patients of the physician are urged to retain his services, and this urging is done, not in the physician's name, but in the name of the profession and as a patriotic duty."

That, in brief, will give an outline of the scheme as a whole. Your committee has considered the matter carefully, and begs to present to you the following resolutions:

"*Resolved*, that the Maine Medical Association recognizes the patriotism of its members who volunteer for active service of the United States Government, and in appreciation of this we recommend that should these members be called into service, the doctors who shall attend their patients should turn over one-third of the fees collected from such patients to the physician in active service or to his family.

"*Be it further resolved*, that the plan of carrying out such an arrangement, with certain modifications, as was adopted by the Maryland State Committee on Preparedness, be approved; and that a copy of this plan, modified as seems best, be sent by the Secretary to the Secretary of each county society for action by that society, and that a copy of these resolutions be published in the next issue of the MAINE MEDICAL JOURNAL."

Signed by your committee,

L. L. POWELL,
A. F. WILLIAMS,
D. M. STEWART,

PRESIDENT HART: I would like to ask if, in that Maryland so-

ciety, there was any distinction made between the fees of city and country patients?

DR. POWELL: I think not as regards Maryland. There is some distinction under the English plan. If you are interested, I will read briefly:

"(a) Town Practice: An equal division of the proceeds between the absentee and his deputy or deputies.

"(b) Combined Town and Country Practices: Three-eighths to the absentee and five-eighths to the deputy, the latter to pay the expenses.

"(c) County Practices Where Traveling Expenses are Important: One-fourth to absentee, three-fourths to the deputy."

So far as I know, no such provision was made by the Maryland society. In our resolution I have marked that especially "with certain modifications." We have given opportunity for such modifications as might seem best adapted to the physicians practicing in this state. That plan had better be worked out in full, perhaps, and presented by the Secretary.

On motion by Dr. Thompson, voted, that the report be accepted and read before this afternoon session by the Secretary, so that the members may have some idea of the matter in advance of action by the county Secretaries.

DR. BRYANT: Mr. President, may I present this report of the Budget Committee, as I must soon leave?

I gave this in part yesterday. The Committee decided to give Dr. Whittier his usual amount, \$25, for the Committee on Venereal Diseases; Dr. Thompson his usual amount of \$100, as Secretary and Treasurer of the Society; Dr. Hart, for expenses as President, \$25; for the stenographer—his bill is usually in the eighties; for the Treasurer's bond, \$5.00; for the badges, the amount, which is about \$11; for insurance on the library, \$6.50. The bills for this session have not yet come in, and the only way that I can see is to leave it with the members of the Council and the Treasurer to settle these bills as they come in. We will try to get them in to-day if we can. Also, there are the three men from Boston and the expenses of Dr. Robinson from the Mayo Clinic. Those bills will probably be within \$100.

Now in regard to the matter of the JOURNAL, I have been talking with Dr. Gilbert. It seems that there are certain contracts that it is going to be pretty hard to break up. He has agreed that he can keep within the appropriation probably of \$700, which he will have. This will probably be cheaper than publishing the transactions. The idea is that the contracts which are made shall be made so that they can be terminated at the end of this year, so that next year, if we wish to dispense with the JOURNAL, we can do so. That seems about the best way we can arrange it at the present time, so I put that in as the report of the Budget Committee. These bills of a small amount can be left to the Treasurer to take charge of.

On motion, voted to accept the report of the Budget Committee.

PRESIDENT HART: Is there anything further to come before the House of Delegates at this time?

DR. WILLIAMS: Mr. President, I think that there are three committee reports not yet presented, and I move you that, if those reports are turned in to the Secretary, they be referred to the committee on publication, to be handled the same as any reports or papers that have been presented at this session.

THE PRESIDENT: I will state that I saw Dr. Hatch, who said that she had no special report to make.

DR. GILBERT: Mr. President, you referred a matter to me, the paper of Dr. Spalding. I heard that paper read at the annual dinner of the Portland Medical Club. It is very interesting, and it seems to me that, in view of the activities of Dr. Spalding and his interest in the organization work and state work, it would be a good plan to publish that paper in the JOURNAL or as a supplement to it. I make that suggestion for the House to take under consideration.

THE PRESIDENT: You have heard the report of Dr. Gilbert. I think you all understand that this paper is one that Dr. Spalding has spent a great deal of time upon and taken a great deal of interest in. It is a very peculiar case and I understand it is written up in a very interesting way. It is a paper concerning a murder that occurred in Waterville some years ago, where a doctor was imprisoned in the State Prison, reported to have died and a post mortem held, and later on he was reported to have been seen in California, I think. The Doctor has gathered evidence on the case for and against, and is really very anxious to get the history of the case preserved in some way. He realizes, however, that the publication of it is a little more than is usually involved in an article in a magazine. There is no historical society, as I understand, that can keep the article for preservation, and, for that reason, he would like to get it entered in some way among the publications of this society. He thinks that by taking extra copies himself, and so on, he would be able to bear a part of the expense. Dr. Spalding is a great worker, has done a great deal for the society in years past, and his wishes, I think, ought to be considered by us.

DR. STURTEVANT: Mr. President, I think that is a very interesting topic, and I make the motion that that be printed in connection with our JOURNAL.

The motion was agreed to.

PRESIDENT HART: Unless there is some further business to be attended to, I suppose we can now adjourn. I know of nothing fur-

ther. There will be a report, of course, before the general session this afternoon.

DR. STEWART: Mr. President, I have been asked by a member from Androscoggin County to bring up the matter of the selection of doctors under this workmen's compensation act. There are some physicians who believe that the law that was worked for by Dr. Hardy, Dr. Beach and Dr. Robinson, allowing the injured party to select his own physician, should go through. The idea is that they want an expression from this association that can be used as a lever at the next session of the legislature. I mention this, not having thought it over, but simply in order to bring the matter before the House of Delegates.

THE PRESIDENT: The idea is that the subject be brought up for consideration and be ground out later in our societies, and kept before the minds of the profession, so as to be ready at the time of the meeting of the next legislature. You understand the law now is that the insurance companies seem to take the privilege of designating some physician or physicians in a place to whom workmen receiving injuries shall be taken for treatment. If a man outside of that appointment happens to be called in to attend the case, he gets his pay for it if he can, and if he cannot, the insurance companies profit just so much. As it now is, the individual has nothing to say in regard to whom he shall employ. I believe that is the present law. Now, we want it changed, and will this House of Delegates vote to recommend that the question be carried to our county organizations for consideration, so that the medical profession may be ready to take up the question at the meeting of our next legislature?

DR. STEWART: Mr. President, I would like to hear from Dr. Hardy, who handled this matter at the last session of the legislature.

DR. HARDY: Mr. President, I was not present at the hearing when this matter was taken up in Augusta this year. It seems to me, however, that the injured party should have some choice in the selection of a physician, and I think that if we, as a society, take a firm enough stand we can bring that about. It is strictly up to us. They have got to come to the medical profession for attendance, and, if we refuse to countenance any such proposition, we can undoubtedly accomplish what we want. A year ago I happened to be attending a meeting in Boston when the matter of health insurance was discussed. I do not believe the insurance companies really care who does the medical work, and I think we are largely to blame as medical men for the position we are now in. There is a tendency among medical men when they are doing work for insurance companies to charge as large, if

not larger, fees than they would charge the individual, and at the present time, under the act that has been in force here in Maine for the last two years, the medical profession is getting forty per cent. of the money expended in compensation. I think if we do this work we have got to be absolutely fair with the insurance companies, and I think if we are, they will be perfectly willing that the work shall go to whomsoever the injured party wants it to go to. I think we must consider this thing pretty seriously and be willing to do this work for fair compensation.

DR. GARCELON, of Lewiston: Mr. President, that amendment originated in Lewiston, I think. I personally went down to see Mr. F. A. Morey about this particular question, and he drew up the amendment that was presented to the legislature this present spring. Now, I know that that passed the House and was killed in the Senate. Personally, in Lewiston, where we have rather large mills, there are one or two men who have been in the habit of doing practically all of the mill work. There are a few of the smaller concerns where the men are permitted to go to whomsoever they please; but this law is interpreted by the Commission in such a way that the individual who is injured, unless he does go to the doctor designated, has to pay his own expenses. I talked with the mill owners themselves on the car coming back from the hearing in Augusta, and practically every one of them said that they saw no reason why that should not pass. They saw no reason why an injured person should not have his own physician, their own personal feelings were that way. I do not know, of course, whether they would want to go on record in that way. This same amendment was passed in Massachusetts without opposition. In Lewiston we do not know just how much we are affected, because the persons who are injured for one or two dressings are directed to go to the mill physician, and probably would be in the future, but if those same people were told that they could go to any physician, they would go to their regular physician and he would get that business. To my mind it seems absolutely a fair proposition, and I think that an expression of this body supporting that point of view would have some influence among the men who later will be candidates for office in the State Legislature. I personally desire an expression, because I think that it will arouse the men throughout the small districts. I have been talking with some of them and they say they have no difficulty that way. Probably there is not enough business, or maybe two or three men get together and agree among themselves not to take unfair advantage of their brother practitioners.

As to the point that the insurance company is paying the bill:

To my mind the insurance company is not paying the bill any more than it is paying the workman his compensation finally. I take the ground that the first two weeks' indemnity up to thirty dollars is a part of the general indemnity that the company is paying to that injured party. In other words, the amount of money paid the first two weeks to the injured party is absolutely nothing, provided there is no medical attention required. It is the individual who pays those bills unless somebody pays them for him, and, if they pay him his regular indemnity after the two weeks are up, why should not this first two weeks—first aid or aid to the injured—be considered a part of that indemnity? To my mind it is a part of it. This matter was taken up in our county association rather late. There was some misunderstanding between the Secretary and the members of the association with regard to who should notify the different Secretaries of the county associations, and, because of that, it was delayed until rather late.

DR. HARDY: Mr. President, it seems to me that the matter of health insurance in the legislature for the next few years is going to be a matter of vital interest to this society, and it has occurred to me whether or not it would be a wise procedure for this society to appoint a committee of three to have special charge of health insurance legislation, to acquaint the subordinate societies with the situation, and prepare a program for presentation to the legislature. It seems to me that would be a wise course to pursue, to have a special committee, say, of three men. I think it would be too much to put that on to the regular Legislative Committee. Really, the trick in getting legislation is in making the proper preparation. There is no question about that.

THE PRESIDENT: I would like to inquire of Dr. Hardy if it would not be a fair proposition, if our regular committee is finding its duties too burdensome, to allow that committee the privilege of calling in whatever assistance it may need to do special work rather than to encumber ourselves with more committees?

DR. HARDY: If you could assure the committee of the coöperation of members of the society, I think it would be all right.

THE PRESIDENT: I think all members would be delighted to serve on that committee as adjuncts.

DR. GARCELON: Mr. President, I might add that this matter was taken up in one of the labor organizations, and that organization was heartily in favor of it.

THE PRESIDENT: If there is no motion before the House, a motion to adjourn, subject to the call of the President, would be in order.

Voted to adjourn.

FIRST GENERAL SESSION, MAINE MEDICAL ASSOCIATION

HELD AT

Portland, Maine, City Building, June 13, 1917.

The meeting was called to order by the President, Dr. W. F. Hart.
Invocation by the Rev. Dr. Mills, of Portland.

THE PRESIDENT: I will state, in behalf of the society, that we would be very glad to have Dr. Mills remain with us, and get what enjoyment he can.

DR. MILLS: I thank you very kindly, gentlemen.

THE PRESIDENT: It is unnecessary for me to refer to some of the unfavorable conditions we are laboring under this morning. The great interest that involves the thought of all of us, combined with sickness coming to some of our members who were to participate in the program, is sadly interfering with our arranged program. I think, however, that those present will endeavor, so far as possible, to make this session a profitable one, although it may not be a very full one in regard to numbers. Dr. Hall, who was to have given us a paper this morning, is unable to be present, so that we shall have to defer that for the present. We will now listen to a paper by Dr. F. N. Whittier, of Brunswick, on "The Best Methods of Securing Pathological Specimens for Laboratory Examinations."

DR. WHITTIER reads.

THE PRESIDENT: Next upon the program will be a paper by Dr. O. E. Haney, of Portland, on "Modern Anesthesia."

DR. HANEY reads.

THE PRESIDENT: Before adjourning the forenoon session, there is an announcement or two to be made. I believe Dr. Everett has one which he wishes to make.

DR. EVERETT: There has been some misunderstanding about the clam bake. The clam bake is to be held to-morrow afternoon at Dunstan. The Portland men are asked to fill their automobiles with the men from out of town and take them to the clam bake. Those not so provided will be furnished with a special car, which will leave front of City Hall to-morrow afternoon at 4.40, which will give ample time to reach Dunstan for the clam bake at half-past five. With reference to the tickets for the banquet, I would like to have as many of you as can buy your tickets this noon in order that I may have a line on how

many are to be there. It has been a source of wonder to me how many were to be here, and I am at a loss with reference to my guaranty to the hotel, so if all those who can will get their tickets this noon, it will be a convenience to me. I think Dr. Milliken would like to make an announcement about the Red Cross exhibits that are here.

DR. MILLIKEN: Gentlemen, I would like to announce for the benefit of the exhibitors here that the Portland Chapter of the Red Cross, made up largely of lay workers, has an exhibit in the rotunda at the foot of the stairs, to which all medical men are cordially invited. I thought perhaps this would be an interesting display, and, with the assistance of Dr. Thompson, I was instrumental in securing this exhibit for this meeting. The location of this exhibit seems a bit unfortunate, because they tell me that the members seem to be in a hurry when they come in to get upstairs, and in a hurry to get out when they go down, so as yet they have not given very much attention to this excellent display. Perhaps to-morrow we can arrange to have this display on the second floor, where it would be rather more convenient. I hope you will all make special effort to look over that display, because they were very kind to bring it down here. In addition to that, the graduate nurses of Portland, numbering perhaps ninety, are doing work for the Red Cross, and they very kindly consented to display the articles which they are making, which will be under the care of a graduate nurse throughout the meeting. They have arranged to keep somebody on hand to explain them to the medical men who are interested in them, as all of you are likely to be.

THE PRESIDENT: The House of Delegates will meet this afternoon at 1.30 in the adjoining room. There will probably be a slight change of program for the afternoon. We, of course, all want to hear Dr. Cousins. He is very busy, and there is a possibility of his giving us a talk at two o'clock, so please let it be known so far as you can, and try to be here promptly at that time. If Dr. Cousins is then present, the program as printed will go on. If there is nothing further, adjournment until two o'clock will be in order.

Adjourned.

SECOND GENERAL SESSION.

JUNE 13, 1917, 2.00 P. M.

Meeting called to order by President Hart.

THE PRESIDENT: There will be another meeting of the House of Delegates at 3.30 this afternoon, and we want it especially under-

stood that every member is to be present at that time, as we have very important business to attend to.

This afternoon there will be a change of program, as was announced at the close of the morning session. Dr. Cousins, by reason of his other engagements, has consented to give us his paper the first thing this afternoon. Following Dr. Cousins' paper, we have a report of a committee that was appointed a year ago, and the report will be made by Dr. Sylvester. Gentlemen, Dr. Cousins.

DR. COUSINS reads.

PRESIDENT HART: We will listen to Dr. Sylvester's report at this time.

DR. SYLVESTER: Mr. President and Gentlemen of the Association:

I have here a bronze tablet, which we plan to place to-morrow forenoon in the Art Building at Poland Spring, as a testimonial to the Rickers for the hospitality and the courtesy which they have extended to us on various occasions. Before I hold this up for your inspection, I will give you a history of it. You will recall that two years ago a committee was chosen, consisting of myself, Dr. Robinson and Dr. Donovan, to get them something. Dr. Robinson, with his artistic tastes, wanted to place there a statue, "Darling's Medicine Man." Failing to raise the money to do this, he notified me last fall that it was all in my hands to do what I saw fit as he could not get the statue. So I went to Boston and saw a bronze firm and got this compromise. I desired to carry out Dr. Robinson's ideas so far as possible and still have a wall tablet; so I worked out the idea of having Darling's statue put in bas-relief at the head of this tablet. I took the liberty and the responsibility of attending to the whole of this myself. After writing a number of inscriptions, I abbreviated them until I have reduced them to the irreducible minimum in order to avoid any criticism.

In regard to the expense of this, I will say that Dr. Robinson turned over to me \$100 which he had collected. I found that, while that would have been enough two or three years ago to have done this job, it was not enough at the present time. I expect when I get the bills in that it will have cost about \$150. I came before the Cumberland County Association here in Portland, and the gentlemen present very kindly and courteously contributed about forty dollars on the spot. Some gentleman from the Oxford County Association contributed five dollars more, and I stopped asking anyone else for fear that I should have more money than I could use. So, at the present time, this is entirely paid for except perhaps five dollars, and there are gentlemen who are anxious to meet that. Therefore none of you need feel that I am dunning you. The association has nothing to pay, and we have planned to go up to-morrow morning with an auto party from the city and present them with this tablet. I have arranged with the Rickers to have it placed at ten o'clock, and Dr. Frederick Hill, of Waterville, will make an address. We do not want to interfere with the program here, but we should be pleased to have any of you accompany us who would like to do so. The inscription is as follows:

"To Hiram Ricker and Sons. An Appreciation. Maine Medical Association. Annual Session. June M C M X V." (Applause.)

On motion by Dr. Sturgis, of Auburn, a vote of thanks was extended to the committee for its work in procuring this tablet.

SECRETARY THOMPSON: Gentlemen, there being no Vice-President present, I will take it on myself to introduce our President, who will now give his annual address. Dr. Hart. (Applause.)

DR. HART reads.

PRESIDENT HART: The House of Delegates meets immediately after the adjournment of this session.

Before adjourning, I will call attention to one point in our program. Dr. Nichols, of Boston, we understand, cannot be with us to-day. We expect him to-morrow, and he will take the place, we hope, of Dr. Isaac Jones, of Philadelphia, who, we understand, cannot come.

Adjourned until to-morrow morning at nine o'clock.

THIRD GENERAL SESSION.

JUNE 14, 1917, 9.00 A. M.

The meeting was called to order by President Hart.

THE PRESIDENT: First upon the program this morning is the subject, "Diagnosis of Anterior Poliomyelitis." I dare not, in introducing the speaker, state all that one could in regard to him, because I would hate to disturb the equanimity of the gentleman's mind by making him feel at all abashed by the highly complimentary terms in which I might speak of him. We are indeed exceedingly fortunate to have with us this morning a man of such reputation as Dr. Francis W. Peabody, of Boston, to whom we will now have the pleasure of listening. (Applause.)

DR. PEABODY reads.

THE PRESIDENT: We will now continue our program by listening to a paper by Dr. Legg, of Boston, "Treatment of Anterior Poliomyelitis."

DR. LEGG reads.

THE PRESIDENT: Gentlemen, we have been listening to very valuable papers and discussions upon a subject which, evidently, the most of us have considered a little deep for us to tackle ourselves, and I think it would be very appropriate at this time to express our appreciation to these gentlemen who have come from an adjoining state to give us such able talks upon this very important subject by a rising vote of thanks.

The association thereupon adopted the President's suggestion by a rising vote.

DR. JORDAN, of South Portland: Mr. President, I have a resolution that I had intended to introduce this afternoon, but, fearing that a great many men will not be here, I wish to introduce it at this time. It is as follows:

"TO THE MEMBERS OF THE MAINE MEDICAL ASSOCIATION:

"WHEREAS, a state of war exists between the United States and Germany, be it

Resolved, That the Maine Medical Association favors national prohibition for the period of the war. Be it further

Resolved, That the Secretary forward to each Senator and Representative from Maine a copy of this resolution, and ask their support and influence for national prohibition."

I do this because a great many young men, not only from this state but from other states, are going into training here. There are times when they are going to be discouraged; there are times when they are going to be homesick and lonesome. You all know what spirits do, and, before you know it, they get into the habit. You all know what the habit is, and I believe that the Maine Medical Association should favor this resolution.

THE PRESIDENT: Gentlemen, you have heard the resolution as offered. Bear in mind that this resolution covers a point that at the present time is something more than a moral question. It is an economic question and one that I think we ought to consider.

DR. BRYANT: I move that it be adopted.

The motion being duly seconded, the resolution was adopted by a rising vote.

PRESIDENT HART: I wish to call your attention to one thing, and that is that the ladies who are exhibiting the work of the Red Cross and the work of the graduate nurses will be very much pleased to have you stop and investigate their work.

I would like to have the members of the House of Delegates meet for a few moments immediately following this session. Between now and two o'clock you are going to have a long breathing spell, and we expect at that time to listen to Dr. Nichols, whom we understand will arrive in season to address us at that time.

Adjourned.

FOURTH GENERAL SESSION.

JUNE 14, 1917, 2.00 P. M.

The meeting was called to order by President Hart.

THE PRESIDENT: We have with us this afternoon a gentleman who is so well known by reputation that he needs no introduction. Dr. Nichols, of Boston, will now address us on the subject, "Experiences in Base Hospitals in France." Gentlemen of the Association, Dr. Nichols. (Applause.)

DR. NICHOLS reads.

THE PRESIDENT: The next on the program for this afternoon is Dr. Samuel R. Robinson, of the Mayo Clinic, Rochester, Minnesota, who will speak to us upon the subject of "Lung Surgery."

DR. ROBINSON: Mr. President:

It has been said that a man who is to make an after-dinner speech cannot eat anything for dinner. It is also true that one who is to read a paper at a medical meeting ordinarily fails to hear the paper that is read before his; and I could not but notice to-day that this was the first paper or talk that ever preceded one of my papers or talks to which I listened and enjoyed every word of. It is only one more evidence that Dr. Nichols is one of the best teachers of surgery in this country. (Applause.)

I find on the program that my subject is to be "Lung Surgery," and, while I brought a paper with me to read, I think that perhaps at the end of this long meeting it would be easier for you to look at pictures than to listen to a paper, so I brought some lantern slides with me which I think are representative of the work we are trying to do. You may always have wondered, and may be still wondering, what there is in the surgery of the chest which is of sufficient interest to induce one to give his entire time to that one branch of surgery. I have endeavored to include in these slides pictures which will suggest cases which you yourselves have had. I have also endeavored to include cases which would be of interest to the medical man as well as to the surgeon, because I believe that it is the coöperative work of the internist and the surgeon to-day which is going to result in progress in thoracic surgery.

Dr. Robinson then explained to the members lantern slides of many cases of lung diseases treated and operated on by him.

At the close of the exhibition of slides, a rising vote of thanks was tendered Dr. Robinson for his talk.

On motion by Dr. Beach, it was voted that the association, through the Secretary, extend to First Vice-President Campbell the regret of the association at his inability to be present by reason of illness.

The Committee on Necrology, Dr. J. A. Spalding, made the following report:

REPORT OF THE NECROLOGIST, 1916-1917.

Under the old regulations of this association, it was the duty of your

Necrologist to read at the meetings his record of those who died during the year, because the transactions were issued but once a year, and months after each meeting, so that no one knew till late what had happened to men in our ranks. Now, however, that we have a monthly JOURNAL, names of deceased members are printed at the time of their death, notices of their lives appear in regular sequence, and there is not so much need of a formal report as of old. Nevertheless, it is a good idea to recall our former comrades and to continue a well established custom.

In fulfilling my duty during the past year, I have faithfully carried out your orders. When accessible, a half-tone portrait has been appended to every biography, and I trust that this plan meets with your approval. As a matter of medical record, a list of those who have died during the past year is as follows:

SAMUEL JOSEPH BASSFORD, Portland, 1848-1917.
 WILLIAM CAMMETT, Portland, 1853-1917.
 LOUIS CALEB FORD, Milo, 1852-1916.
 ROLAND SUMNER GOVE, Sanford, 1870-1916.
 DANIEL HENNESSEY, Bangor, 1836-1916.
 LEWIS HORNBY, Presque Isle, 1873-1916.
 MARTIN PIPER JUNKINS, Wells, 1853-1917.
 GUSTAVUS CLARK KILGORE, Belfast, 1850-1917.
 HENRY THOMAS MCCARTHY, Lewiston, 1878-1917.
 JOSEPH MICHAEL O'CONNOR, Biddeford, 1876-1917.
 CHARLES EMERSON PHILOON, Auburn, 1841-1917.
 HUGH FELIX QUINN, Bangor, 1879-1916.
 NEIL WATSON ROBINSON STRAW, Portland, 1854-1917.
 JOHN EMILE WADSWORTH, Skowhegan, 1878-1917.

We regret those who have finished their work. We think of their former presence amongst us, and of their comradeship and usefulness in working for medical advances. Their deeds are recorded permanently in our JOURNAL. Few of us accomplish all that we would like; almost all of us continue to the end to look forward, like those who have gone before, to wider works of influence. But as we come, so we go, and mostly without a warning, as in the sudden deaths of Kilgore, O'Connor and Straw, of late.

As we meet to-day, we cannot help thinking of the war before us, the most momentous in the history of the world, the greatest crisis against civilization with which the world has ever been threatened. Those who are older must help at home, while it is the plain duty of the younger men to arouse, to go far from home, and to care for the wounded on the battlefields. So far as human ken can see, it is plain that if we are not victorious abroad, our turn for invasion will surely come. The only prevention is the presence abroad of every available man, with physicians enough to care for them, and now. If death abroad is to be your fate, you will never know it, and it will be no worse for your family than it has been for the families of our associates who have departed from us in times of peace. For friends and relatives, and the nation, will see to it that the bereft shall be looked after properly, in honor of those who fall in the noblest cause in the history of the world, or who, after doing their life-saving duty, shall return, wounded and incapacitated. (Applause.)

I think that but a few of you recognize the momentous position that the Hohenzollern family and the nation of Germany occupy in this world. Start-

ing out as a little bit of a family on the top of a hill in the country, they gradually accumulated a little power and a little money, and then the smartest one of them, 800 years ago, built a castle across a road, and everybody that went over that road had to go under the Hohenzollern castle and pay a duty if they wanted to go from one part of the country to another. It is 500 years ago on the 23rd day of last April that they obtained power in Prussia, and for 500 years they have continued to dominate, to add to their possessions, to take away from other countries and to extend their dominions. They are a great race and there is no denying it. They conquered a portion of Austria, portions of Denmark and Poland, and then took the French provinces of Alsace and Lorraine, crushed out other small states, gave them a nominal rank, and made the Hohenzollerns the greatest of them all. Everybody was to pay a tax to them, just the same as to the original Hohenzollern 800 years ago. Every child who goes to school is taught that the Kaiser is the greatest man that ever lived and that what he says goes and they must obey him—one generation after another; and you have forty-seven years of generations of people educated up to that idea since the time of the last war. You can see what this world is up against. They are going to beat us if they can, and it is our business to beat them if we can, and we can do it better away from home than we can here, because those who go will have the benefit of the training which has already been done abroad. The men who go as surgeons will get experience that never will be equalled again. The percentage of deaths among surgeons is not so much higher than it is here in the very place where we live. Now I say, let the young men go, and let the old men at home offer to the President of the United States all the ability and the power that they have. (Great applause.)

JAMES A. SPALDING, *Necrologist*.

On motion, voted that the report be accepted.

SECRETARY THOMPSON: Report of the House of Delegates.

The Secretary wishes to report that the membership in this association has increased from 625 last year to 724 this year; also that Waldo County, which two years ago dropped its membership, has re-organized and come back with a membership of twelve. The delegates have held five meetings and have attended to the usual routine business. One matter, which, perhaps, may be a source of surprise, is that the dues next year, and for one year only, have been increased two dollars, so that for the coming year the dues of the state society will be four dollars instead of two. That has been done for two reasons: First, on account of the low financial condition of the treasury; and second, the delegates voted to pay the dues of the members who are going into the service of the Government. Therefore next year the dues of the county society for each member will be four dollars instead of two.

Another matter taken up was the matter of medical defense. That matter was discussed and finally placed in the hands of a committee to draw up plans and to report at the meeting next year.

Another matter that was taken up was the matter of those who stay at home bearing some of the burden, and of protecting the practice of the doctor who has gone into the service in some way; and those of you who get the next issue, or the one after, of the JOURNAL will there find the report of the committee having the matter in charge suggesting a way in which this may be done.

I will read you the names of the officers for the ensuing year.

<i>First Vice-President,</i>	GEORGE COOMBS, Waldoboro.
<i>Second Vice-President,</i>	D. M. STEWART, South Paris.
<i>Secretary and Treasurer,</i>	J. B. THOMPSON, Bangor.

BOARD OF COUNCILORS.

First District,	F. N. WHITTIER, Brunswick.
Second District,	G. L. PRATT, Farmington.
Third District,	A. F. WILLIAMS, Phippsburg.
Fourth District,	OLIVER W. TURNER, Augusta.
Fifth District,	W. N. MINER, Calais.
Sixth District,	B. L. BRYANT, Bangor.

COMMITTEES.

Program. F. A. Jackson, Houlton, Chairman; E. H. Gehring, Portland.

Public Policy and Legislation. The old committee was retained. That is one of the most important committees and that committee has been retained entirely: D. A. Robinson, Bangor; T. E. Hardy, Waterville; S. J. Beach, Augusta.

Committee on Venereal Diseases. This committee was also retained, as it has been for a number of years: F. N. Whittier, Brunswick; A. L. Stanwood, Rumford; R. A. Holland, Calais.

Necrology. J. A. Spalding, Portland.

Cancer Committee. Thomas A. Foster; John Sturgis, Auburn; G. A. Pudor, Portland.

On motion by Dr. Sawyer, voted, that the report be adopted.

SECRETARY THOMPSON: The Council has met and audited the accounts of the Secretary and also the various committees, and found them correct.

Voted, that the report be accepted.

THE PRESIDENT: We come now to the last and very interesting event of the session, the election of a president.

DR. SAWYER: Mr. President, Dr. Hill, of Waterville, was to make this nomination, but he was obliged to take the train and he requested me to act as his substitute. I am very glad that in this particular case no eloquence is required. I desire to place in nomination a man whom I believe has done more for this association than any other man in it, a man whom you all know and honor. I place in nomination Dr. James A. Spalding, of Portland. (Applause.)

DR. COTTRELL of York: Mr. President, it is fitting, perhaps, that the southernmost county in the state, as well as the northernmost, should have something to say about this nomination. We have here a chance to honor one of our most eminent men, but a chance to do greater honor to this association if we select him as our leader. Everybody knows his long years of earnest, effective, conscientious and in-

telligent work, and everybody who knows him knows that his highest aim has been to bring out and develop the best, the highest and the most loyal in medicine. I take great pleasure in seconding the nomination of Dr. Spalding as President of the Maine Medical Association. (Applause.)

DR. WARREN: Mr. President, I have known Dr. Spalding for forty years. No one could represent this association better than Dr. Spalding. He is known the United States over for his medical ability, for his knowledge and for his courtesy as a gentleman, and it gives me great pleasure also to second the nomination of Dr. Spalding.

DR. WILLIAMS: In behalf of the Third District, I take great pleasure in seconding the nomination of Dr. Spalding, and I now make the motion that the Secretary of this association be instructed to cast the ballot of this association for Dr. Spalding.

The motion was agreed to, and the Secretary performed the duty assigned him, and Dr. James A. Spalding was unanimously elected President for the ensuing year. (Long continued applause.)

DR. SPALDING: Gentlemen, I have my misgivings about accepting this position as President of the Maine Medical Society. Why do you not pick out a man who can hear better than I can? But I will tell you! If I cannot hear, I can work, and I think I can work for the advancement of medicine as well as anybody else. I intend to begin to-night on some important work for the benefit of the Maine Medical Association, and I intend to continue it daily until another year has passed. I trust that in the year to come, after the annual address is finished and the meeting adjourned a year from now, you will agree that I have done as well as I could, that I have tried my best, and that I shall be deserving of your thanks. (Great applause.)

THE PRESIDENT: I wish to announce that the House of Delegates decided upon Portland as our place of meeting next year. The meeting is adjourned, and I thank you for the consideration you have shown your presiding officer.

Adjourned.

Necrology.

DR. JOSEPH MICHAEL O'CONNOR.

Biddeford, 1876-1917.



Dr. O'Connor, former President, and always from the time of his election a very prominent member of the York County Medical Society and of our own association, died very suddenly, after grievous symptoms of ptomaine poisoning, Friday, April 20, 1917. He fell critically ill on Wednesday, tried to take care of himself in his office, made his way home on the next day in spite of his very serious condition, sent for medical advice and a consultation was held, but all was in vain. His condition was beyond medical wisdom to cure.

During his comparatively brief practical life of seventeen years he had accomplished a great deal of good in medicine and obstetrics in his native city. Born, the son of Daniel and Hannah Scannell O'Connor, March 31, 1876, making him a little beyond forty-one years of age when he died, so suddenly, he studied in the parochial and city schools, and obtained his medical degree at the Medical School of Maine in 1898. Directly afterward he went abroad, studied nearly two years in the Rotunda at Dublin, obtained there a diploma for proficiency, and finished his post-graduate education at other hospitals in Europe. Coming home in 1900, he settled in Biddeford, exercised a great deal of patience and gradually built up a flourishing practice, served with attested skill on the staff of the Webber Hos-

pital, was a pillar of support to the clergy and the poor of St. Mary's Parish, exhibited real gifts for friendship, was social in every way, and though unostentatious in his manners, his presence and his influence were felt in every circle in which he moved.

As his portrait shows, he was a man of very attractive personality, and in the memory of his associates of the County Medical Society he will long be recalled to mind as a regular attendant at their meetings, a fluent speaker and debater, a genial, polite and courteous presiding officer. His retiring speech as President will also long be recalled with pleasure. It is with unfeigned regret that we hear of the death of a man who, though he had already done much in medicine, was promising for still greater usefulness to the community, and to the profession, at the time of his sudden death.

J. A. S.

WILLIAM CAMMETT.

Portland, 1853-1917.

Dr. William Cammett was the son of Captain Stephen Cammett, of Portland, who in his active life was a sea captain, for a long time in charge of a packet ship, the John Codman, running between Liverpool and Havre in France. His mother was Jane Harrison McArthur, of Limington. The Cammetts descended from one of the earliest families in Portland by the name of Dudley.

Dr. Cammett was educated in the public schools of Portland, studied medicine for one year in the Medical School of Maine, and obtained his degree at Columbia. He then settled in Portland, in the eastern end of the city, gradually went into politics in a quiet way, served some years satisfactorily as City Physician and many years on the School Committee. In this position he did a great deal of good for the schools and school children of Portland. He was also a member of the Common Council and Board of Aldermen. Although a man of a so-called rather short temper, he never cherished any ill will for any length of time against anybody, and passed in the community as a careful, conscientious, unassuming practitioner of medicine. In the interests of his patients he would often call a consultation with specialists, and in order that they might not be frightened by examinations by physicians with whom they had no previous acquaintance, Dr. Cammett would go with them to the specialist's office and see the patient quietly and steadily through a consultation, no matter how much time was involved.

Dr. Cammett was married in 1881 to Miss Eugenie DeLancey Staples, of Steep Falls, who survives him. A son died some years ago.

I find, on inquiry, that our late comrade was attacked with pneumonia in the winter, something from which he never recovered, and that his heart weakening in April, he died rather suddenly, April 19, 1917.

I should call his chief characteristic staunchness in friendships. Once friendly with a man he remained so always. He was a great reader of general literature and devoted much time to one of its most remarkable branches, that of English grammar.

In medicine he also read extensively, but regretted the poverty, as he expressed it, of the medical magazine literature of the day. He was much given to the study of the *materia medica* and of its usefulness in practice, but could see nothing in the fashionable laboratory tests with their voluminous tables of figures. He was very fond of constructing instruments of music, the violin and the zither, several exceedingly fine specimens of which came from his workshop during his life. They were indeed marvels of skilled industrious application, and, together with their exceeding beauty of build, they gave forth marvelously sweet tones beneath the fingers of their maker and master.

J. A. S.

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County News and Notes.

YORK.

YORK COUNTY MEDICAL SOCIETY.

The 89th quarterly meeting of the York County Medical Society was held at the Old Orchard House, Old Orchard, Thursday, June 28.

Dr. C. F. Kendall, of Biddeford, the Vice-President, presided at the business session, which was opened at 11.45 o'clock. The minutes of the April meeting were approved. Drs. S. B. Marshall, of Alfred, B. F. Wentworth, of Scarboro, and L. L. Powell, of Saco, were appointed a committee to present resolutions on the death of Dr. Joseph M. O'Connor, of Biddeford.

An interesting letter written by Dr. C. E. Cook, of South Berwick, President of the society, was read. Dr. Cook has been located for several weeks at Fort Benjamin Harrison, Ind., as a member of the M. O. R. C.

Dr. L. L. Powell presented a detailed and valuable report as a delegate to the recent meeting of the Maine Medical Association.

Dr. Kendall, a member of the Medical Corps of the National Guard of Maine, gave an instructive address relative to the Medical Officers' Reserve Corps.

A recess was then taken for dinner, which was served from 1.00 to 2.00 o'clock.

At the afternoon session Dr. J. A. Spalding, of Portland, President of of the Maine Medical Association, spoke for about half an hour in his characteristically bright and entertaining manner.

The principal address of the day was delivered by Dr. Forest C. Tyson,

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superintendent of the Augusta State Hospital, his subject being "The Function of the State Hospital in Social Service." This was one of the best papers read before the society in many years. It touched upon several matters of vital interest to physicians and laymen, and was of unusual value throughout.

A rising vote of thanks was extended Drs. Spalding and Tyson.

This was the annual "Ladies' Day" of our society, and, as for many years past, it was an enjoyable event.

There were present: Dr. and Mrs. J. A. Spalding, Portland; Mrs. E. L. Shepley, St. Paul, Minn.; Dr. and Mrs. F. C. Tyson and two children, Augusta; Dr. and Mrs. C. F. Kendall, Dr. and Mrs. C. J. Emery, Dr. Grace E. Wheaton, Dr. and Mrs. E. D. O'Neill, Dr. C. F. Traynor, Biddeford; Dr. L. L. Powell, Saco; Dr. B. F. Wentworth, Scarboro; Dr. and Mrs. F. W. Smith, York Village; Dr. and Mrs. W. W. Smith, Ogunquit; Dr. and Mrs. S. B. Marshall, Alfred; Dr. and Mrs. H. A. Owens, Bar Mills; Dr. and Mrs. W. H. Baker, West Buxton; Dr. and Mrs. F. C. Lord, Kennebunk; Dr. and Mrs.

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Personal News and Notes.

On a recent evening the St. Croix Medical Society entertained Dr. J. R. N. Smith, of Milltown, Me., at the summer cottages of Drs. Gilbert and Bunker, at Red Beach. This was an event of importance, inasmuch as Dr. Smith graduated from medical school in June, 1867. A most enjoyable food feast was prepared by the ladies, and the doctors did justice to it. Dr. Smith gave a most interesting talk on his fifty years of medical practice, contrasting methods then in vogue with those now used. The doctor was presented with a gold ring as a token of esteem from the St. Croix Medical Society. A general discussion, with toasts to the doctor, closed up a very pleasant and memorable occasion. Those present were—Dr. J. R. N. Smith, guest of honor, members of St. Croix Medical Society, viz.: Drs. Holland, President, Marion, Secretary, Mason, Miner, Blair, Gray, Cranston, Gilbert and Bunker, hosts. Invited guests present were Drs. Dibble, of Moore's Mills, Barker, of Woodland, Young, of Oak Bay, Armstrong, of Robbinston, Johnson, of Princeton.

Dr. and Mrs. G. I. Geer, of Portland, are receiving congratulations on the birth of a daughter.

Dr. Paul S. Hill, of Bath, expects to sail for France for service at the front.



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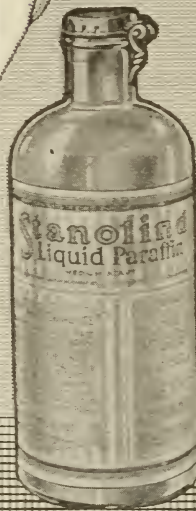
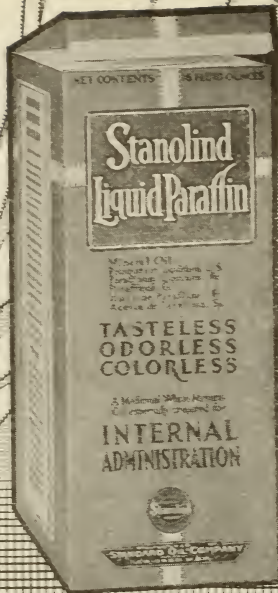
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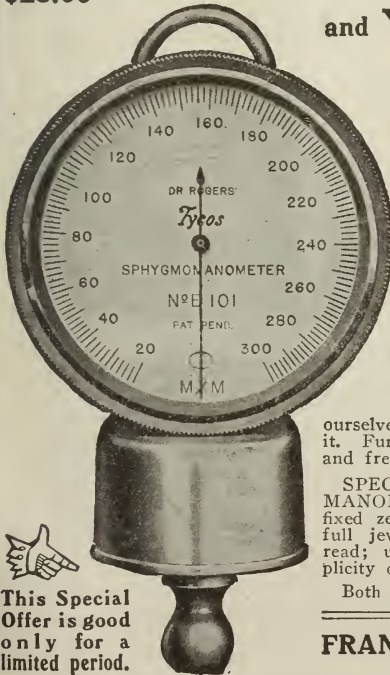
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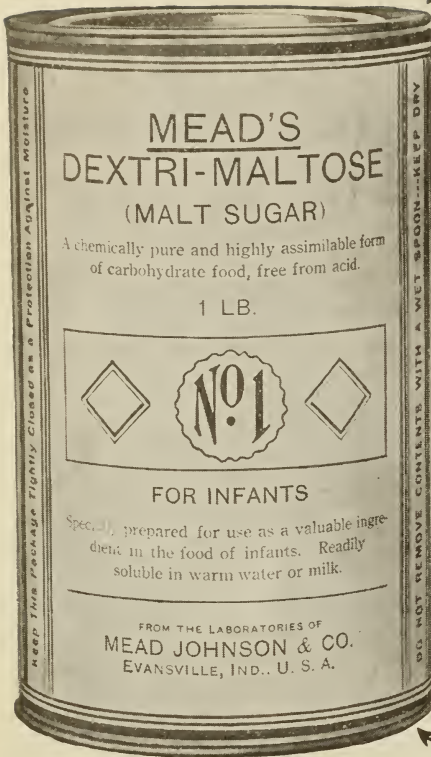
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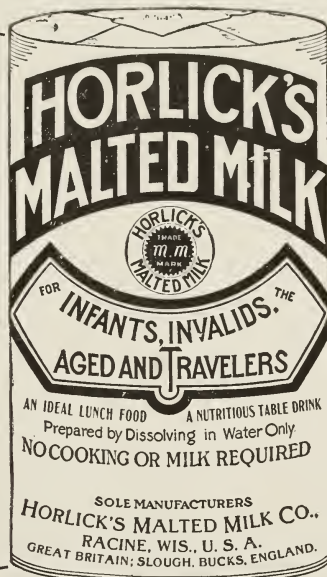
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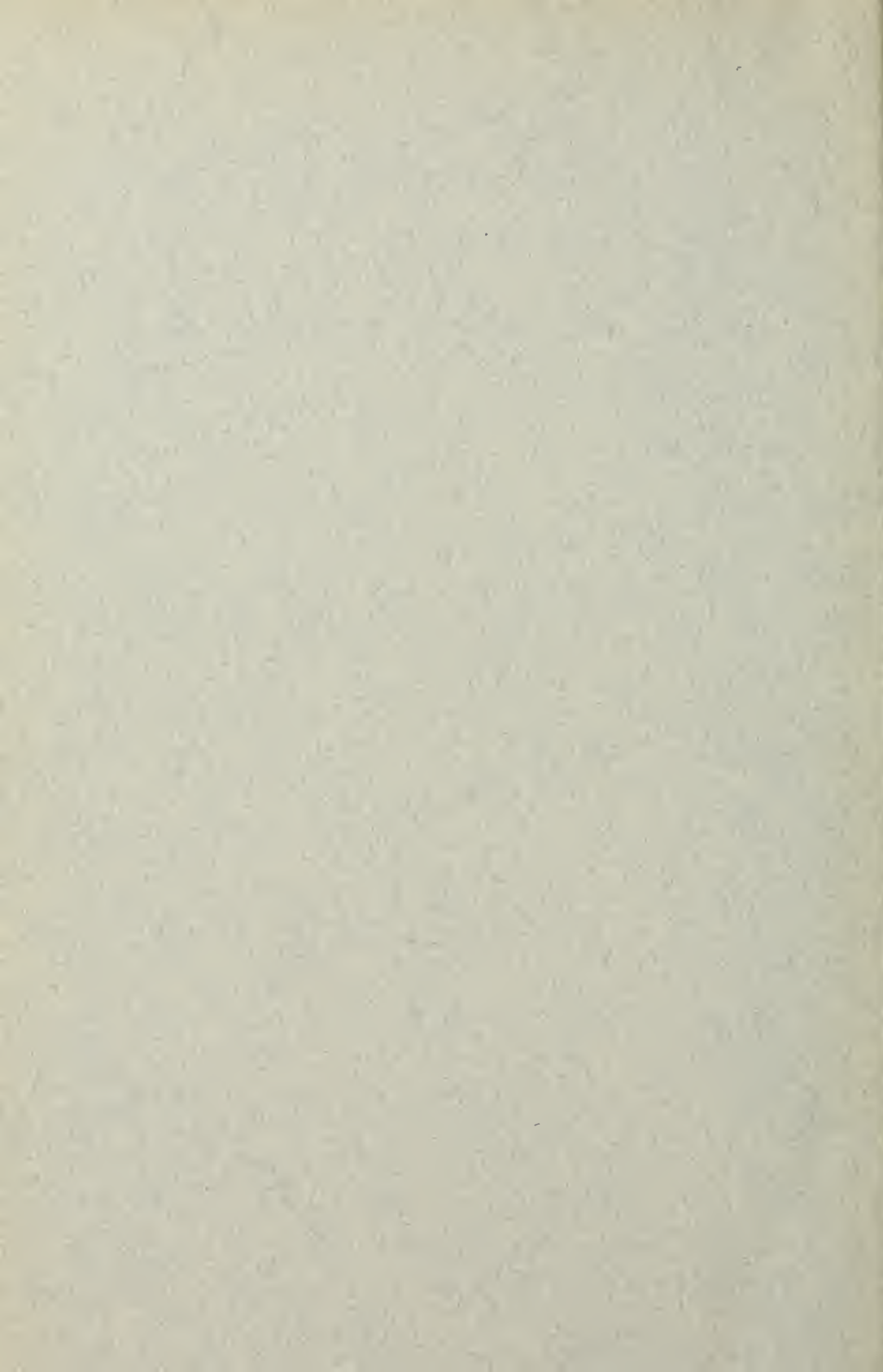
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